The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 601.—Vol. XVII. LONDON, SATURDAY, FEBRUARY 27, 1847. [Price 6d.

MACHINERY AND ENGINES WANTED FOR ABROAD.—PARTIES having good and substantial NEW or SECOND-HAND MACHINERY and ENGINES, as mentioned below, may hear of a PURCHASER, by applying by letter, post-paid, to Mr. D. WILSON, care of Messrs. Gower and Co., LONDON.

One 80 or 60-horse power BLOWING-ENGINE, condensing or expansive, with two cylinders.
HOT-AIR BLAST and BLOWING APPARATUS, for one pair of furnaces, 14 feet in the boshes.
One SET of CYLINDERS and ROLLING-MILL, complete, with engine, shears, tilt-hammer—capable of turning out 100 tons of bar-iron a week.
Three 30 or 40-horse power CONDENSING WHIM-ENGINES, for winding-up coal.
Sixty underground COAL WAGGONS, or TRUCKS and KIBBLES.
Two BOILERS, for the blowing-engine.
One BOILER each for the other engines. 1
ALL these BOILERS to be FORMED and GOT READY for putting together, but to be delivered in plates, with the necessary rivets, and the same completed where destined to be used.

Parties having the above machinery, or any part thereof, or parties willing to supply the same new, are requested to furnish particulars, delivered at the nearest port for shipment.—Manufacturers willing to CONTRACT to SUPPLY the same, and erect them in the country, being answerable for their good performance for 12 months, under their own workmen, will have the preference.

Second-hand machinery will be submitted to the approval of an engineer, appointed for the purpose.—Further particulars to be obtained at the above address.

MINERAL FIELD IN MID-LOTHIAN.—TO BE LET, for such term of years as may be agreed on, the COAL, LIMESTONE, and IRON-STONE in the LANDS of DUDDINGSTONE and BRUNSTAIN, in the county of MID-LOTHIAN, the property of the Most Noble the Marquis of Abercorn.

The coals consist chiefly of what are termed the Edge Seams of Mid-Lothian, which are numerous, and of various thickness and quality—some of them containing Gas, or Parrot, Coal. There is also reason to expect, at Duddingstone, Black-band and Ironstone, such as have been found at Dryden and Greenlaw, in the same range of coals; and Limestone has been worked on the estate.

The near vicinity of this coal-field to the city of Edinburgh and the town of Portobello, and the direct access by Railway to Edinburgh, as well as to the ports of Leith and Fisherrow, render it peculiarly advantageous for a colliery.

An engine-pit has been already sunk to a considerable depth at Magdalene-bridge, where it is understood to have reached within about 20 fathoms of the Jewel Coal; and an inclined plane mine, in one of the Edge Seams of Coal, has been extended to Joppa—in which mine coal-wall was prepared and ready to work; but both operations have been suspended since the death of the late tenant, and the pit and mine are thus at present filled with water; but the steam-engine and machinery, which were erected by the late tenant, are still on the property (and may be had at a valuation by a tenant), readily commanded the water when the works were in progress.

The collieries will be shown by Mr. Allan Livingstone, Joppa; and for particulars application may be made to Messrs. Reid and Geddes, mining engineers, 40, Albany-street, Edinburgh, with whom are the plans and sections of the coal-field.

Edinburgh, Feb., 1847. 2

VALUABLE COAL MINES.—TO BE LET, ON LEASE, all those THREE several superior BEDS OF COAL, called the WATERLOO COAL, the MAIN SOFT COAL, and the LOWER HARD COAL, lying and being under 133 acres of land, situate at BRINSLEY, in the county of Nottingham.

Abutting to the above, and drained by the same level, are about 360 acres of the two last-named beds, belonging to noblemen and parties willing to lease the same—forming together (and without a fault) 493 acres of excellent coal seams. The bottom one is particularly adapted for iron-making.

The Erewash Valley Railway (the most direct London line) connects the property by a short branch; and the Ambergate, Nottingham, and Boston line will pass within 30 yards of the deepest point of the estate.

For further particulars apply to Messrs. Lucas and Cutts, solicitors, Chesterfield; or Mr. Thomas Goodwin, mineral agent, Ripley, Derbyshire.

Feb. 13, 1847. 3

COAL WAGGONS, &c., FOR SALE.—ABOUT ONE HUNDRED and FIFTY COAL WAGGONS, which have been rendered unserviceable by the alteration of the Kilmarnock and Troon Railway to an edge line. They are adapted for a tram railway, 4 feet 4½ inches wide; hold 30 cwts. each;—are in good working order, and will be found very suitable for any private railway or service work; they could be shipped conveniently at Troon Harbour for any part of the kingdom.

A large quantity of TRAM RAILS, of cast-iron, 30 lbs. to 35 lbs. per yard, will be DISPOSED OF, along with the waggons, if desired.

Apply to John Muir, Gatehead Colliery, Kilmarnock, N.B. 4

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calciferous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post-paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire. 5

BY HER MAJESTY'S LETTERS PATENT.

BRUNTON'S ORE-DRESSING FRAME—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption, as

THE FOLLOWING TESTIMONIALS WILL CERTIFY.

Penzance, Feb. 6, 1847.

Two of Mr. Brunton's Frames have been at work at Wheal Gray Mine about six weeks. From the reports of the agents, as well as from our own observation, we have reason to believe, that, by the use of these Frames, there will not only be a great saving of labour, but that the work will be done better than by the common frames.

THOMAS BOLITHO & SONS.

Ward House, Barr, near Tavistock, Nov. 10, 1846.

My Dear Sir,—I have much pleasure in bearing testimony to the utility of your Patent Frames, which I look upon as one of the greatest improvements, in tin dressing particularly; and have no doubt of their answering for returning lead and copper, where the ore is obliged to be reduced to a small size. The frames answer well at Tincroft Mines; and I am desirous (as the inclosed offer will show) to introduce them at our other tin mines, and the Tamar-head Silver Mines. Yours, very truly,

Mr. Wm. Brunton, jun. P. M. JOHNSON.

Coal's Kitchen Mine, Nov. 19, 1846.

Sir,—We have had your Patent Frames working in this mine for the last 18 months—during which time I have had them severely tested; and am happy to inform you, that I have found them, in every way, superior to the old method of dressing; and I am convinced, that it is to the interest of mines in general to use them.—I am anxious to have the last four I ordered erected as soon as possible. I am, Sir, your obedient servant,

Mr. Wm. Brunton, jun. JOSEPH VIVIAN.

St. Ives Consols, Dec. 7, 1846.

Dear Sir,—Your Patent Frames have been working in this mine for 18 months, and I am happy to bear my unbiassed testimony to their utility. They are a very great improvement, in tin dressing, on the old method; and I am convinced, if your Frames were in general use in this county, the saving in labour would be considerable, and an increase of mineral obtained in the first process. I am, dear Sir, yours respectfully,

Mr. Wm. Brunton, jun. RICHARD KERNICK.

Birch Tor Mines, Dec. 3, 1846.

My Dear Sir,—Your Frames having been at work for the last four months on this mine, I have much pleasure in bearing testimony to their utility in tin dressing. We find them very superior to any thing else now in use, both as regards dispatch and cheapness; and we also find the tin cleaned by them to be of a much higher produce. I have also tried copper slimes on them, and find they are equally as beneficial in dressing these ores as they are in the dressing of tin. Yours very truly,

Mr. Wm. Brunton, jun. R. EDWARDS.

Camberne, Nov. 26, 1846.

Dear Sir,—We have examined your Frames at Cook's Kitchen, and are of opinion, that they are vastly superior to any other for the purpose of cleaning ores; and will, doubtless, supersede every other now in use. They are neat, well constructed, scientific-looking machines, and can be worked at much less cost, and render the ores of higher produce, than any other we have seen. Yours truly,

Mr. Wm. Brunton, jun. NICHS. VIVIAN, NICHS. VIVIAN, Jun.

Carn Brea Mines.

We, the undersigned, have great pleasure in testifying to having used Mr. Brunton's Patent Frames on these mines for the last eight months; and also to the great saving effected by them in the dressing of our tin ores. JAMES MINERS,
NICHOLAS LENTEN,
MATTHEW ROGERS, Sen.
WILLIAM WEBB,
WILLIAM ROBERTS,
JOHN DAW,
JOHN VIVIAN.

LICENSES can be obtained, and all information given, upon application to the PATENTEE, POOL, NEAR REDRUTH.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual. 7

TO RAILWAY CONTRACTORS, COALOWNERS, MINERS, AND OTHER PARTIES USING LONG RANGES OF PIPING.

CHARLES MACINTOSH & CO.,

SOLE MANUFACTURERS OF THE PATENT VULCANISED INDIA RUBBER WASHERS, of any description or figure, for Joints in Steam and Water Pipes.

C. M. & Co. can confidently recommend the washers, having received from engineers and others, who have used them, strong testimonials in their favour. These washers are easily applied to pipes of every description, and of any bevil; and any unevenness on the surface of the flanges, instead of being objectionable, as in the ordinary mode of making joints, is, in the case of the Vulcanised India Rubber Joints, a positive advantage, especially where great pressure is used. These joints will sustain no injury from violent tremor in pumping, or otherwise.—Manchester, Jan. 29, 1847. 8

ELECTRO-TELEGRAPHIC CONVERSER.—As Inventors and Patentees of a far more PERFECT and EFFECTIVE TELEGRAPH than any that has hitherto been conceived, for which her Majesty's Royal Letters Patent have been granted to us, we respectfully invite attention to its peculiar applicability, not only to Railways, but likewise to Docks, Mines, and other extensive public works—manufactories, and even private establishments. With the merits, and with the defects, of the various apparatus hitherto employed for Telegraphic purposes, we are perfectly conversant; and we have no hesitation in asserting, that, when the extraordinary advantages of our discovery shall be fully made known, this patent will be universally preferred to every other system.

Complete as our plan at this moment is, and matured as are our arrangements for bringing it into practice, certain legal forms, as well as the dictates of prudence, will, for some time longer, delay its development; and our object, in troubling you with the present intimation, is merely to suggest to the directors of railways, mining companies, and others, the inexpediency of their sanctioning any particular Telegraphic scheme, until made acquainted with the nature and extent of our patent improvements.

BRETT & LITTLE, 140, Holborn-bars. 9

ELECTRO-MAGNETIC TELEGRAPH—GAMBLE AND NOTT'S PATENT.

PATRONISED by H. R. H. PRINCE ALBERT, the LORDS OF THE ADMIRALTY, &c.

The PATENTEES beg to inform all RAILWAY COMPANIES, that they are ready to TREAT with them for the ERECTION of the TELEGRAPH, on any length of railway, on the most reasonable terms.—This instrument, from its simplicity of construction and certainty of action, is, after the most severe test, proved to be the most useful and efficient instrument of the kind ever yet invented, as reported on by Dr. Faraday, Capt. Brandreth, Professor Brande, Dr. Bachhoffner, &c., and, in fact, all the science of the country.

It may be seen in daily operation on the London and North-Western Railway, where it is in practical use, between Blisworth and Northampton stations; also, at the Telegraph Office, 2, Royal Exchange-buildings, where all particulars may be obtained, and the report seen.—The Telegraph is lectured on by Dr. Bachhoffner, at the Royal Polytechnic Institution, Regent-street. 10

PATENT METAL-CORED RAILWAY SLEEPER COMPANY.

Capital £100,000, in 10,000 shares, of £10 each.—Deposit 1s. per share, as limited by 1 and 2 Vic., cap. 110, to be made up to £1 per share on complete registration.

Not less than Three Months interval for future Calls.

PROVISIONAL DIRECTORS.

JOHN BRAITHWAITE, Esq., C.E., 29, Bedford-square.
JOHN FULFORD OWEN, Esq., Ridgway Oaks, Enfield.
CHRISTOPHER R. READ, Esq., Holyport, Berkshire.
HENRY WRENCH, Esq., Priory, Old Windsor.
(With power to add to their number.) 11

TRUSTEES.

FREDERICK MILDRED, Esq. JOHN WALLER, Esq. HENRY WRENCH, Esq.

BANKERS—Messrs. Masterman, Peters, Mildred, Masterman, and Co.

SOLICITORS—Messrs. Tustin & Barlow, Bridge-street, Blackfriars.

STANDING COUNSEL—Charles Stewart Drewry, Esq.

SUPERINTENDENT—Joseph Gud, Esq.

PROSPECTUS.

It is remarkable that while great improvements have year after year been made in locomotive engines, the construction of the road upon which those engines are to run has remained without any improvement, since the time when the Liverpool and Manchester Railway was made. The great improvements which have been introduced into locomotive engines have now, however, rendered it absolutely necessary for engineers to turn their attention to the best means of improving the construction of what is called the "permanent way" of railways. In such a consideration, the stability of "railway sleepers" must, of course, be a matter of paramount importance.

A company has, therefore, been formed, for the purpose of carrying out an invention by which this object will be effectually secured. The invention, which has been just patented, consists of a railway sleeper, formed of a wrought-iron core embedded in a bituminous concrete. This invention, it will at once be perceived, will be of the utmost importance in the construction of railways; the advantages will consist of economy and stability, by which the cost of the "maintenance of permanent way" will be largely reduced, and safety effectually secured. The new patent sleeper will be imbedded in the concrete already described, by which the core will be entirely prevented from coming in contact with either air or water, and will consequently not be liable to external injury.

The imbedded sleeper may be moulded to any form, by which an extended bearing surface or area will be obtained, which may be increased as circumstances may require.

The great advantages of this system are obvious, as will be seen by an inspection of the drawing and following statement:—

1. The wooden sleepers ordinarily in use on railways are liable to become rotten in a very short time.

The sleepers prepared upon this principle are free from this objection, inasmuch as their component substances are not liable to any alteration, however long they may be exposed to the air or buried in the ground.

2. The spikes, so long as the wooden sleepers remain wet, hold fast, but in dry weather they become loose; and the shaking of the carriages tending to draw them upwards, it follows that the fibre around the hole in the sleepers is thereby impaired, and it is of no use to drive them down again in the same place—thus, the chairs becoming loose, the removal of the spikes is indispensable.

With the patent sleepers this cannot take place, because the chair is attached to the metal core in such a manner as to prevent the possibility of the least derangement.

3. Another particular feature of the metal-cored sleepers is, to combine a certain degree of elasticity with such weight as to give to the rails that fixity which it is impossible to obtain by wooden sleepers. The advantages of both wooden sleepers and stone blocks are thus obtained, without their attendant evils.

4. The patent sleepers being cast in a trough, are capable of receiving any shape suitable either to the nature of the ground or to the different plans of the engineers. The bearing surface may be increased at a very trifling additional expense, and distributed under the chairs in a larger proportion than in the middle of the sleepers, if deemed advisable.

The circumstance of the sleepers being shaped in a trough, elicits another consideration worthy of notice. The bearing surface being exactly the same in all the sleepers, it follows that every yard of the line rests upon an equal and homogeneous base, possessing a like degree of elasticity. The motion of the train on them is thus rendered exceedingly smooth, and the noise arising from the shaking of the rails in the chairs, is, in a great measure, avoided. Wooden sleepers are destitute of this advantage, because their bearing surface is seldom of a determinate area, and the nature of the wood employed (sometimes oak and sometimes Scotch fir) admits of no equality in the bearing.

5. Another advantage of the metal-cored sleepers over wooden sleepers is, that when, by any casualty or accident, the patent sleepers become damaged, they retain a value equal to four-fifths of the prime-cost, because the whole of the substances of which they are composed are capable of being re-manufactured at an expense not exceeding one-fifth of first-cost; and every re-manufacture improves the tenacity of the composition.

6. On this system, the chairs forming part and parcel of the sleeper, and being already keyed to the right gauge, the saving in laying the permanent way will be very great, as the plate-layers will only have to lay them on the ground, and key the rails in; thus, a great economy in the labour will be the consequence of the adoption of this system; and, in many instances, the sleeper might be manufactured on the line.

7. But the most important consideration in favour of this new system, next to its additional safety and durability, is the price—particularly when it is considered that the patent sleepers are absolutely indestructible. However, as the cost depends entirely on the size required, as well as on the weight of the chairs, it is unnecessary, at present, to enter into any detail on that point, the circumstances being so variable.

A certain number of patent sleepers have already been laid down since April last, on the London and North Western Railway (London and Birmingham), on which line there is greater wear and tear than on any other in the kingdom.

The trial on this line having, for the last 10 months, proved satisfactory, the professional gentleman specially appointed to that department have suggested, that an order should be given for an additional number of sleepers, with a view of testing them in a different manner, and on a more extensive scale than hitherto, which sleepers are now being manufactured, and will be immediately laid down under the guidance of the engineers in chief of the London and North Western Railway. They are also about being laid down on the Enfield and Edmonton Railway. Arrangements are also in progress with other companies for the adoption of this system of sleepers upon an extensive scale.

The requisite trials having been made for testing the efficacy of the new invention, the necessary steps have been taken for carrying it out to the fullest extent; and with this view an agreement has been entered into with the patentee for conceding his rights to this company on exceedingly advantageous terms. All, therefore, that now remains to be done, is to raise the necessary capital to enable the company to enter into engagements for laying down the patent sleepers on the various lines of railway throughout the kingdom.

The deposits will at once be applied, after payment of preliminary expenses, towards the completion of the orders already received, and getting the company into active operation, so that the shareholders may at the earliest possible moment have an opportunity of ascertaining the value of their investment.

Specimens of the sleepers and concrete may be inspected at the temporary offices of the company, No. 1, GUILDHALL CHAMBERS, BASINGHALL-STREET, where all necessary information may be obtained.

Application for shares to be made to the secretary, at the office, as above.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 12

WILLIAM H. SMITH, MINING SHARE AGENT,
10, *WARNFORD-COURT, THROGMORTON-STREET,*
has SHARES FOR SALE in the following MINES—viz.:

WHEAL LOUISA,	ALBERT CONSOLS,
WHEAL BLENCOWE,	WEST SHEPHERD,
WHEAL MARY PENTUAN,	VICTORIA TIN MINING COMPANY.

*** Every information will be afforded on application. 13

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS,
N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 14

MESSRS. J. PAINTER AND CO, SHAREBROKERS
MINING AND GENERAL AGENTS,
25, *CASTLE-STREET, LIVERPOOL,*
AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, upon application. 15

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,
MATTHEW-STREET, TAVISTOCK.
Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract. 16

THOMAS P. THOMAS, MINE AGENT, AND DEALER
IN RAILWAY AND OTHER SHARES.
18, *THREADNEEDLE-STREET, LONDON.* 17

MR. R. TREDINNICK, MINING AGENT AND DEALER
IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON. 18

MESSRS. LINTHORNE, JONES, AND CO., STOCK,
MINING, AND SHARE AGENTS,
*** Every information will be afforded as to the markets and prices of the above, by application (post-paid) at their offices,
48, *THREADNEEDLE-STREET, LONDON.* 19

MESSRS. R. CLARK & CO. beg to acquaint their friends and the public in general, that they have taken OFFICES as below, where they intend to carry on BUSINESS as STOCK, SHARE, and MINING AGENTS; relying with confidence upon the method adopted by them for conducting all business entrusted to their agency, Messrs. R. C. & Co. solicit a continuance of that support it will be, by strictest attention to all orders, their endeavour to deserve.

N.B.—Money advanced upon scrip and other securities.

3, Austinfriars, Broad-street, Oct. 17, 1846. 20

JAMES LANE, MINING SHAREBROKER,
75, *OLD BROAD-STREET, LONDON.* 21

IMPERIAL BRAZILIAN MINING ASSOCIATION,
Winchester-house, Broad-street, London, 25th Feb., 1847.—The directors of this association having, under the powers vested in them by the deed, made a CALL of TWO POUNDS on each of the shares of this association, the proprietors are requested to PAY the same, on their respective shares, on or before the 29th day of March next, to the London Joint-Stock Bank, Princes-street, the bankers of the association.

No transfer can be made until payment of the call.

GEORGE THOMAS, Acting Director. 22

NATIONAL BRAZILIAN MINING ASSOCIATION.—Notice is hereby given, that, after Wednesday next, the 3d March, no SHARES, or SCRIP, WILL BE MARKED, or MONEY RECEIVED, on account of the CALL of £1 per share on the marked shares and scrip due on the 16th inst. By order,

28, Tavistock-street, Feb. 24, 1847. R. IRELAND, Secretary.

A report may be obtained at this office. 23

WICKLOW COPPER MINE COMPANY.—The DIVIDEND of TEN PER CENT., which has been declared for the past half-year, will be PAYABLE on and after the 1st of March next, at the banking-house of Messrs. Puget, Bainbridges, and Co., London; and at 11, Lower Ormond-quay, Dublin.

Dublin, Feb. 20, 1847. 24

DARTMOOR CONSOLS TIN MINING COMPANY.
In 2048 shares, of £9 each.

The PROSPECTUS of this company, with the REPORTS of the Mining Agents, who have inspected the productive lodes in this highly important adventure, will be READY FOR DELIVERY on application at the offices of the company,

No. 58, LOMBARD-STREET, LONDON. 25

WHEAL MARY UNITED MINING COMPANY,
In 1000 shares, of £10 each.
ON THE COST-BOOK PRINCIPLE.

The PROSPECTUS may be obtained of the London secretary, Mr. W. Whecomb, 167, Fleet-street, London.—Office entrance: second door on the left, up Johnson's-court, where the Cost-book will remain during the week for signature. 26

COOMBE VALLEY SLATE COMPANY.
Capital £5000, in 1000 shares, of £5 each.—Deposit £1 per share.
CONDUCTED ON THE COST-BOOK SYSTEM.
OFFICE, No. 5, WHITEFRIARS-STREET, FLEET-STREET, LONDON.

The proprietors of this splendid undertaking having, after several months of persevering industry, now clearly opened on a bed of rich slate, feel themselves morally bound to offer a participation of its advantages to the public, in the several proportions as above described. The quarry was commenced, and will be conducted, by a party of practical men (merchants and traders), whose object it is to carry it out on a principle never yet attempted by any other company. The resources they have of turning every thing into immediate account, which, by means of improved machinery, they are enabled to do; the greatest advantage, inasmuch that what is in most quarries called waste, will in this be made marketable. They have now on hand orders for thousands of tons of slate, of every description, waiting to be supplied, which, when executed, will be turned into ready cash. There will be no expensive offices to keep up, as all the agents will be remunerated by a responsible commission, at a per centage. The strictest economy will be observed, and all the accounts open, at all times, to the inspection of the shareholders. The quarry is situate in the parish of St. Ginnes, in the county of Cornwall, one mile from the shipping port of Cragington, on the Bristol Channel, and consists of about 7 acres of land, all one entire bed of fine blue slate, 6 feet below the surface. A river runs through the estate, that will be made available for driving the machinery. The lease is granted for a term of 21 years, at the nominal rent of £10 per annum, with no royalty.

The management of the company will be vested in the hands of three trustees, and 13 committee men—the whole of them connected, more or less, with the sale or manufacture of slate.

Detailed estimates, carefully prepared, from actual experience, with sectional drawings of the sett and present workings, have been made, which, with specimens of the slate, may be seen at the office of the company, where prospectuses, and every information, can be obtained.—Application for shares, in the usual way, may be made to Mr. James Lane, mining share agent, 75, Old Broad-street, City, London; Mr. T. Sanford, Exeter; Messrs. Teyth and Luscombe, Plymouth; Mr. T. Carpenter, Callington; Mr. J. Huxham, Launceston; and of Mr. C. S. Richardson, secretary, at the office of the company. 27

AYRSHIRE MALLEABLE IRON COMPANY.

DIRECTORS.

CHAIRMAN—JOHN HAMILTON, Esq., of Dunfillan.
WILLIAM CROIL, Esq., merchant, Glasgow.
ALEXANDER ALISON, Esq., of Pitcon.
THOMAS BIGGART, Esq., Dalry.
JAMES MILLER, Esq., iron merchant, Ayr.

The directors beg to announce, that they have succeeded in effecting an AMALGAMATION with the BLAIR IRON COMPANY, whose works, for the making of pig-iron, have been in operation for some time, and have thus secured an abundant supply of the finest ironstone and coal, which, with other privileges acquired by this arrangement, cannot fail to give the joint company advantages possessed by no other similar work in Scotland. The business of the company will henceforth be carried on under the firm of the

AYRSHIRE IRON COMPANY,

and the new works will be proceeded with as soon as possible.

The directors farther announce, that they have made a CALL of ONE POUND TEN SHILLINGS per share on the stock of the company, which call will require to be PAID into the account of the Ayrshire Iron Company with the Western and British Linen Banks, not later than the 10th March next; and interest, at the rate of 5 per cent., will be charged on all calls not paid up by said date; and the directors reserve the right to forfeit any shares on which, after due intimation, the calls may not be paid.

The directors having it now in their power to allow their shareholders to participate in the profits of one branch of the iron trade, hereby intimate, that they will pay a dividend at Martinmas first, at the rate of 10 per cent. per annum, on the deposits and calls from date of payment; and all shareholders, in addition to the above call, have the privilege of paying up the full amount of £10 per share, or such part thereof as they may find convenient—which payments will also bear interest at the rate of 10 per cent. per annum as aforesaid.

By order of the directors,

Ayrshire Iron Company's Office, JOHN HAMILTON, Chairman.
413, Vincent-street, Glasgow, Feb. 22, 1847. 28

RAILWAY IMPROVEMENTS—MR. COLES'S LOCOMOTIVE ENGINE.

Mr. Coles, a gentleman of considerable mechanical genius, and who is the inventor and patentee of many valuable discoveries, amongst which are improvements for diminishing friction in the bearings of rollers, or wheels, by causing one tier of wheels, or rollers, after another to roll upon the axletrees of those beneath them; so that if a pair of wheels, or rollers, be 10 times larger than the axle beneath it, the upper rollers run 10 times slower than the ground wheels—the next tier 100 times, and the third 1000 times, and so forth—so that the actual working wheels are relieved of the rubbing surface, as the collars, or guides, in which his carriage axles run, have nothing resting upon them; and as this principle may be carried out *ad infinitum*, it may not be uninteresting to many of our readers to know, that, when the friction is transferred from the ground wheels to that of the first pair of rollers, one-third of the power will draw the same burden on a flat level surface; and, when the friction is transferred to the next tier of rollers, 9-10ths of the friction is diminished, on models sufficiently strong to carry 150 lbs. weight—at least, so it stands recorded in Mr. S. C. Bree's *Glossary of Civil Engineering*, published about seven years since. Now, this mode of getting rid of friction, and decreasing the wear in the working parts, as well as preventing the possibility of producing a heated axle, is objectionable—for, where the rubbing parts are, there would be scarcely any motion.

Mr. Coles, however, does not stop here; his next aim is to remove the friction produced by the outer wheels rubbing against the rails, and some times running over them. Here he introduces a plan of lowering the outer rail, and enabling the off-wheel only of the engine to run on its largest diameter for any given distance—even a yard or two, if requisite—whilst every other wheel throughout the train would run faster on the longest rail—their flanges would not be deep enough to touch the step of the rail; and, to attain this important end, every pair of wheels throughout the train must act independent of each other—not only in the carriages, but in the locomotive also; each part of the engine and carriages carrying with them a pendulum-buffer—thus enabling the buffers to remove any thing that may lie within an inch of the rails—they being so mitred throughout, and working independent of each other, as not only to prevent the carriages (should they pass over any small substance) from running off the rails, but at the same time prevent their tilting, however unequal they might be laden—as the upper and nether buffers would both receive the concussion at the same time, and the gravitation be brought nearer to the earth than by any other mode hitherto adopted. It is true, such a carriage, with its buffer, might be suspended to a crane, and lifted perpendicularly off the rails; but, as the two-wheeled carriage rests only on a point, its action upon the buffer is similar to a pair of steelyards, and thereby incapable of moving it; a series, or train, of such carriages, with their buffers, would, if employed upon any atmospheric railway, act as perfectly as a chronometer—as every pair of wheels throughout the train could run as much faster upon the outer rail, as the outer rail is longer than the inner one, and be equally as much in their element upon a curve as upon a straight line.

Fig. 1.—*Ground Plan.*

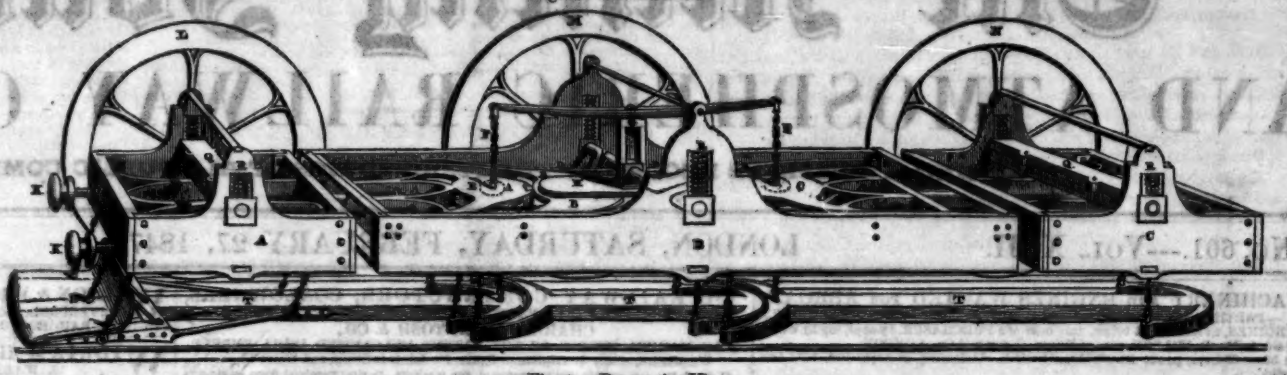
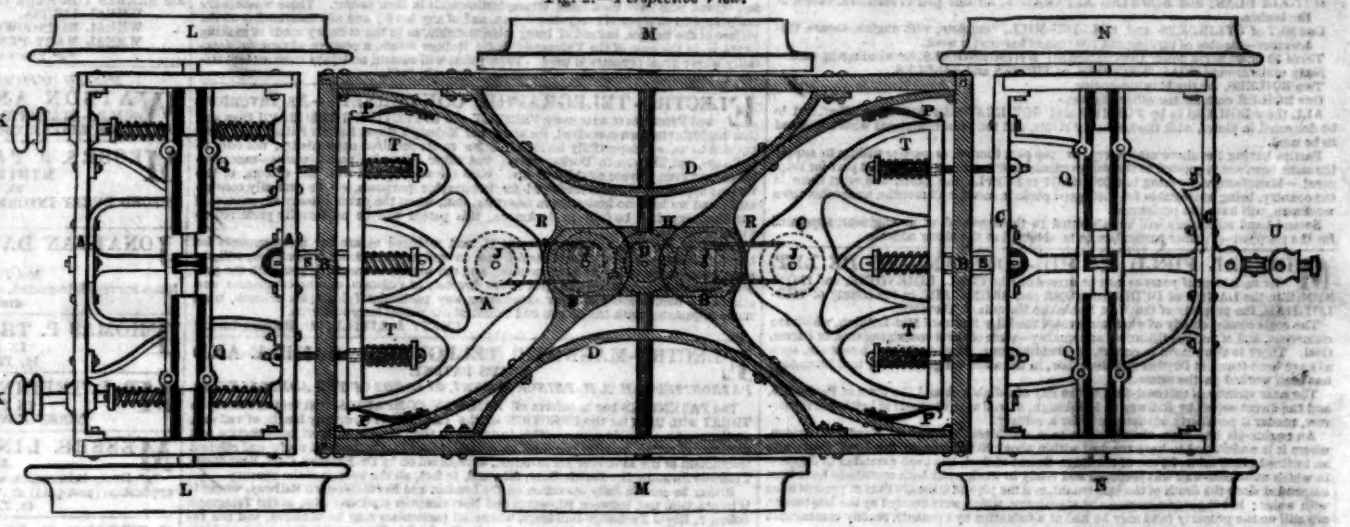
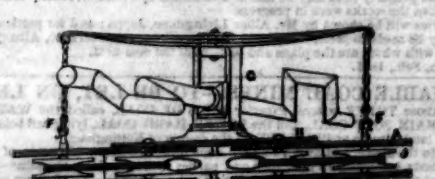
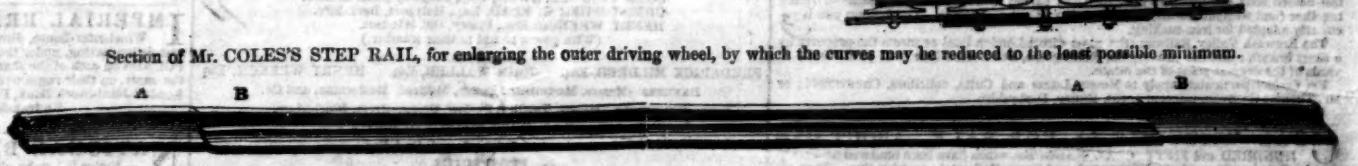


Fig. 2.—*Perspective View.*





Section of Mr. COLES'S STEP RAIL, for enlarging the outer driving wheel, by which the curves may be reduced to the least possible minimum.



DESCRIPTION.

Fig. 1, represents the ground plan of Mr. Coles's locomotive engine.

A, A, A, the fore-part of frame-work.

B, B, B, the middle or driving-part of engine.

C, C, C, the hind-part of engine.

D, D, two stays to support the arms and sides of frame B.

E, section of one arm and its hook to pulley.

F, F, eye bolts fixed in fore and hind-parts of frame, by which they are suspended and kept level with the middle portion, as shown in the small section, or side view, of frame-work, with their pulleys; the pillar passing through the centre pulley, sustaining the spring and chains, to which the superincumbent weight of the fore and hind parts are balanced.

J, J, J, J, pulley wheels for connecting the fore and hind parts to the centre, by means of two chains embracing the working pulleys, which unite the three parts together.

K, K, the buffers to protect the engine.

L, L, the fore-wheels working with a divided axle in collar Q Q, the bottom part of collar only is shown.

M, M, the driving wheels of engine.

N, N, hind-wheel working as in axle Q, Q.

O, the pulley through which the pillar is bolted, and supported by an elliptic cross-stay, from side to side of frame B.

P, P, P, P, four springs attached to frames B, B, which serve as guides to keep the frames A and C, in their true position.

R, R, two chains by which the three frames are united.

S, S, two bolts having two strong iron tubes passing with each bolt through the end frame of B, and at their ends a powerful spiral spring to pull out when the engine strikes off, as also to connect the fore and hind parts together, of frames A and C.

T, T, T, T, iron wire chains, having each a tube driven through the innermost frame to sustain the springs designed to protect the centre bolt from being strained, when either of wheels have obstructions to contend with, such as undulations on the rails, preceding or after having passed the curves, these undulations being raised on both rails at the same time.

U, the joint, having a sliding motion in the centre part, to enable both ends to rise or fall when passing over such obstructions; to these joints, every carriage throughout the train would be attached—thus keeping their axletrees level with the horizon, and standing in a true line, or nearly so, with the centre of each curve.

Fig. 2, is a perspective view of the same engine: this shows also its buffers—having a shovel attached to the fore-part, passing from rail to rail, and which, when any thing of bulk is borne off its weight, will bring the buffer upon the rails, or push aside any thing which might lie within an inch of the rails.

The ends of the buffers would be cast, the middle portion solid throughout, to give weight to the frame B; these buffers are suspended to three chains in front, and four other chains, each carriage, as well as the engine, carrying its buffers throughout the train.

The hindmost might also be an engine with its buffers reversed, ready to receive the antagonist, when, if these buffers do not bear off the entire concussion, the engines may receive the remainder without injury.

A, A, B, B, C, C, side frames.

D, D, the crank.

E, frame to which the pulleys are attached.

F, F, chains to spring, to support frames A and C to their pulleys.

G, the pillar through which the crank passes, which supports the spring and frames of A and C to their pulleys, the pillar resting on plate H.

K, K, the breast buffers of the engine.

L, the fore-wheel of the engine, working in collar Q.

M, the driving-wheel of ditto.

N, the hind-wheel, as before described, working in collar Q.

O, cross stay, to support pillar in B frame.

Q, Q, the collar cases. P, P, P, top cross stays.

R, R, R, series of spiral springs over axles of the engine.

S, the shovel to remove the obstructions, rather than allow the wheels to pass over them, when they run off the rails or destroy the machinery.

T, T, T, T, the buffers underneath the engine are attached similarly to those of the two-wheeled carriages, they having two chains before and behind, all being disunited in threes, will make a perfect six-wheeled carriage. These drawings have been altered, and henceforth, the upper and nether buffers will appear as receiving the concussion at the same time.

INCREASE OF SUNDERLAND SHIPPING.—The following is a list of the number of vessels registered in the port of Sunderland:—31st of December, 1846, 870 ships, 178,584 tons; 31st of December, 1845, 852 ships, 171,782 tons—showing an increase last year of 18 ships, and 6,802 tons.

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IMPORTANT TO THE IRON TRADE.

JURY COURT, FEB. 10.

A. Rapid, Esq., and R. Menzies, Esq., Counsel for the Pursuers; T. Gammon, Esq., and N. Suttle, Esq., Counsel for the Defenders.

Lockhart, Hastie, and Walker, Esqs., Agents for the Pursuers; C. and G. Glossin Esqs., Agents for the Defenders.

BULL AND CO. v. BEAR AND CO.—This case, in which T. Bull and Co., iron-merchants, Glasgow, were pursuers, and M. Bear and Co., Glasgow, were defenders, came before Lord Fairplay, and a special jury, on Wednesday.

It arose out of alleged attempts on the part of Bear and Co. to reduce the price of Scotch pig-iron, of which article Bull and Co. are large holders.

Damages laid at 6000*l.*

Mr. RAPID opened the proceedings by briefly stating the nature of the charge, and explaining the importance of the Scotch pig-iron trade.

Mr. FRIENDLY, of the firm of W. Friendly and Co., was then called: Is a merchant in Glasgow. Is familiar with the Scotch pig-iron trade. The quantity of Scotch pig-iron made last year was 520,000 tons. The local consumption and shipment for the same time was 620,000 tons, exceeding the make by 100,000 tons. The stock was reduced in 12 months from 240,000 to 140,000 tons. Finds from the scarcity of minerals, and high price of coals and wages, that the make of this year will not exceed that of last. Is of opinion that the consumption and shipment will be considerably greater. Knows that above 50,000 tons of the present stock is held by English capitalists. Thinks they paid about 5*l.* per ton for it. Knows that they will not sell at present prices. Knows the firm of Bear and Co. Has known them ever since he was in the iron trade. Is certain their operations are hurtful to Bull and Co.

Mr. TRUEMAN, of the firm of R. Trueman and Co., was then called: Is extensively engaged in the iron trade in Glasgow—principally in the foreign trade. The foreign shipments last year were 100,000 tons, principally to France, Holland, Germany, United States, and Italy. Knows that the shipments to America this year will be much larger than last, owing to the short shipment last year, and reduction of duty this. Knows from the last advices that the stock in New York was nearly exhausted. The wants of France this year will be fully equal to last, and greater if the duty is reduced. Has no doubt, from the numerous railways in course of construction in Holland and Germany, that they will require as much as last year. There is every prospect of Italy requiring considerably more. The foreign shipments last year were one-fifth of the make. The shipments of pig-iron to the continent are always small in January—they were so last month. Knows the firm of Bear and Co. It is not his interest to do business with them. Believes they do a large business, especially in dull times. Knows that their system of business injures Bull and Co. greatly.

Mr. TRUSTY, of the firm of W. Trusty and Co., was then called: Is extensively engaged in the iron trade in Glasgow—principally in the home trade. Next after our own local consumption, England is the great and increasing market for Scotch pig-iron. The shipment of Scotch pig-iron to England and a few ports in Scotland and Ireland last year, was 200,000 tons. Believes, from the greatly reduced stocks of English pig-iron, that the shipments from this will be largely increased this year. Knows that the stock of Scotch pig-iron at Runcorn on the Mersey, for the supply of Manchester and other large towns, has been much reduced. Knows that Staffordshire and Wales are nearly exhausted of English pigs, and are getting considerable supplies from this. Sees that Ireland is getting considerably more this year than last. Considers that that the consumption in Scotland by founders, which was estimated last year at 200,000 tons, or 4000 tons a-week, will be fully as large this year, many of them having enlarged their works. Knows that the new malleable iron-works in Scotland will take a very large quantity of Scotch pigs this year. Knows that they have been making puddle bars all last month. This is a great additional source for consumption. Knows that the present price of Scotch pig-iron is 75*s.* per ton, and common Scotch bars 10*l.* per ton. Knows that the relative price of pigs ought to be 5*l.* when bars are 10*l.* Sees from the authorised returns in the *Glasgow Herald* of Monday last, that the shipments of Scotch pig-iron, foreign and coastwise, and the consumption for local purposes, in January, exceeded the make by 14,197 tons. This is a remarkable decrease of stock in January, when little or no iron is shipped to the continent. It is caused by the increased shipments to England, and by the local consumption. Believes, from the present demand and prospects, that the stock of pig-iron in makers' hands, at the 30th June next; will be exhausted; and that the stock in the yards in Glasgow, will be reduced to the 50,000 tons held by English capitalists.

The witness handed in the under-noted statement showing this result:—

Recollects the years 1836, 1837, 1838, and 1839, when iron was in great demand for railways. The average price of Scotch pig-iron for these years was 5*l.* per ton. Thinks that we have entered upon one of these periods of great demand. The increased demand arises principally from the construction of railways and other works, where large quantities of iron are used, such as water, gas, and malleable iron-works at home and abroad. Recollects that the harvests were not abundant, and that we imported large quantities of foreign corn in these years. Sees that the Bank of England's rate of discount then was as high as 5 per cent., and that consols were at 90 to 91. Sees that the average amount of bullion held by the Bank of England in those years, was between 6,000,000 and 7,000,000, and was at one time as low as 2,000,000. Sees that the present amount is 13,000,000.

Here Mr. GAMMON interrupted Mr. Rapid, and appealed to the court whether his learned brother was not straying very wide from his subject.

The examination of Mr. TRUSTY was then resumed: Knows the firm of Bear and Co. Thinks their operations injurious to the iron trade. Does not think they would do much harm if dealers bought only for immediate delivery, either with cash or bill. Has no doubt this would benefit the trade and raise prices. Knows that respectable firms in Glasgow will advance 65*s.* per ton upon iron at present, for 1 per cent. commission, and hold it for four months, at the bank rate of interest.—Cross-examined by Mr. GAMMON. Is quite certain that the average price of Scotch pig-iron for 1836, 1837, 1838, and 1839, was 5*l.* per ton. Knows at one time it was as high as 7*l.* per ton.

Mr. H. BROWN, of the firm of P. Bell and Co., ironmasters, Glasgow, was then called: Has large iron-works near Glasgow, upon which he has laid out a large capital. Is now paying his colliers and miners more than double the rate of wages he did in 1843. Sees no prospect of a reduction of wages for several years. Has difficulty to keep up his make of iron at present. Knows that the best ironstone fields in the Monkland district are worked out. Most of the ironmasters in this district have yet to get their capital back from their works. Can only do so from an advance in the price of pig-iron. Cannot employ ordinary labourers profitably in coal and iron mines. Must be bred to the work. Expects to be pushed for deliveries and shipments of iron this year. Has often been surprised at makers selling their future make of iron. Sees that it creates an apparent stock that does not exist. Thinks makers will be cautious in doing so this year from the demand upon them for delivery. Confesses he has done it. Thinks the practice hurtful to the trade. Has no doubt its effect is to lower prices. Admits that its effects are the same as if the farmers in the country were selling not only the corn they had thrashed, but the stacks they could thrash for three or six months to come. Thinks the country would thank the farmers for this at present. Has no doubt it would lower prices of corn. Is shipping iron largely at present. Does not think the money market should affect the price of pig-iron, which is very low in price, as compared with the high price of bars, and the stocks of which are rapidly diminishing. The present price of his pig-iron is 78*s.* per ton. Has sold it at 5*l.* 6*l.* and 7*l.* the ton. Does not see how it can remain at its present low price when the demand is so great, and malleable iron so much out of proportion in price. Has done business with Bull and Co. largely, but never with Bear and Co. Considers their operations hurtful to Bull and Co., to the extent of 10*s.* to 20*s.* the ton.

Mr. C. HANDSWORTH, iron merchant, Birmingham, was then called: Does a large business with the Staffordshire ironmasters. Visits the works regularly. Knows there is a great scarcity of minerals in Staffordshire. Knows they cannot remedy this. Knows the ironmasters have large orders for all kinds of finished iron. Knows that there is no stock of pig-iron in Staffordshire. Knows that some Scotch pig-iron has been brought into Staffordshire, and more will be brought. The price of best pig-iron in Staffordshire is 5*l.* 10*s.* per ton, long weight.—Here Mr. GAMMON again interfered, and the witness withdrew.

Mr. W. TASKER, Newport, South Wales, was then called: Is shipping agent for the Newport Iron Company. Receives the iron from the works, and ships it. Never knew the orders for rails so large as at present. Knows that the stock of pig-iron in Wales is reduced very low. Knows that considerable quantities of Scotch pig-iron have been brought into Wales just now for the first time, with one exception. Knows that large quantities will be required this year. The price of best Welsh pig-iron at present is 5*l.* per ton. Recollects shipping rails to the London and Birmingham Railway in 1836 and 1837, at 14*l.* per ton. Knows that the present price is about 10*l.* Recollects the years 1836, 1837, 1838, and 1839, when many of the railways were delayed for want of rails. Should not be surprised to see the same this year, especially if our rails are admitted into France at a moderate duty.

Various other witnesses were examined to prove the damage sustained by Bull and Co.—Mr. GAMMON addressed the jury for the defenders, but declined calling evidence.

Mr. RAPID then addressed the jury for the pursuers, after which Lord FAIRPLAY summed up in his usual lucid manner.

The case was then about to go to the jury, when M. GAMMON rose and said, that after the important facts brought forward by the pursuers in evidence, the weight of which his clients had not till then fully considered, and from the able charge just delivered by his lordship, his clients, Messrs. Bear and Co., were desirous of an amicable settlement.

Parties then retired for a short time, and, upon their reappearance, Mr. RAPID informed his lordship that a satisfactory arrangement had been come to. The jury were then directed to find a verdict for the pursuers.

Statement referred to in Mr. Trusty's evidence:—

Stock at 31st December, 1846	*Tons* 140,000
Estimated make for six months, to 30th June, 1847	260,000—400,000
Estimated shipments and consumption for six months, up to 30th June next, at the same rate as last year	310,000
Anticipated increase to England, America, Ireland, Italy, and for new malleable iron-works near Glasgow	40,000—350,000
Estimated stock at 30th June, 1847	*Tons* 50,000

THE MINING INTEREST OF CORNWALL.

TO THE EDITOR OF THE WEST BRITON.

SIR,—My attention has been called to an address to the miners of Cornwall, emanating from Mr. Joseph Thomas Treffry, which appeared in the last publication of your contemporary, the *Cornwall Gazette*—[See *Mining Journal*, Feb. 6.]

Mr. Joseph Thomas Treffry, like his Grace the Duke of Newcastle, whom he has evidently selected as his model, feels himself in an isolated position; whilst the rest of the world have been advancing with rapid strides, he has been standing still, and he discovers that he is alone. It would appear to be the tendency of persons in this unhappy position, to relieve their overburthened minds by public lamentations and complaints. His Grace of Newcastle addressed his *Jérémiade* to the people of England—Mr. Joseph Thomas Treffry, in his smaller sphere, closely following in the steps of his illustrious prototype, addresses *his* to the only people of England with whom *he* has any concern—the miners of Cornwall. The document is curiously illustrative of the peculiar state of mind I have hinted at, and, at the same time, is characteristic of the man. Confused and illogical, full of appeals to bygone feelings, opinions, and theories, it is a compound of bigotry, bitterness, and discontent. All the world has deserted the Cornish miner, even those who were formerly his truest friends, his natural protectors, whose interests are identical with his own—all, all, have betrayed and abandoned him—all, save Mr. Joseph Thomas Treffry, and that active and eloquent friend of the people, Mr. William Rashleigh, Jun., M.P. These two stand alone in Cornwall as the miners' friends! And it appears doubtful whether even the honourable Member for East Cornwall has rendered to his leader and guide that efficient assistance which could have been desired. Certain expressions of Mr. Treffry's lead me to think that he is not altogether satisfied with the management of his deputy, at the meeting at Pearce's Hotel, Truro—that sole result of all his efforts to arouse the county to a sense of its impending doom—that meeting of the seven gentlemen connected with the mining interest, the particulars of which are so naively given us) seems to have come to the reasonable and wise conclusion that, even if it were desirable for the protection of the Cornish mines—a point upon which evidently more than doubts existed upon the minds of the seven gentlemen assembled—it was hopeless to expect that the tree of protection would be allowed to flourish in Cornwall alone, after it had been cut down and utterly exterminated in every other part of the kingdom.

In fact, it is abundantly clear that there is no longer existing in Cornwall any feeling in common with Mr. Treffry in this matter. In the advancement, the enlightenment of the public mind on the great questions of free trade, the most intelligent and the best educated county in England (speaking of its working population) has fully participated; and Cornishmen, even if they thought it for their interest, have too much good sense, and too much good feeling, to desire to stand before the country advocates, on purely selfish grounds, for (in the words of the memorial alluded to by Mr. Treffry) this sole "remaining remnant of an otherwise abandoned policy."

If, therefore, Mr. Treffry's address to the "miners of Cornwall" had contained no worse matter than the harmless ebullition of his lamentations and complaints, I should not have thought it necessary to intrude on your valuable space by any reference to it. But there is a mischievous tendency and intention pervading Mr. Treffry's letter, which call for notice. I allude to the attempt which is evident throughout, to connect the recent movements amongst a portion of the working population of some of the mining districts of Cornwall, for the purpose of preventing the exportation of corn, with certain steps which have been recently taken to procure the removal of the duties on the importation of foreign copper ores. That this is Mr. Treffry's intention is clear from the general tendency of the letter, and particularly from the following passages. After describing his abortive attempt to get up a public meeting at Truro, and its failure, he goes on to say:—"*Therefore, though grieved, I was not surprised at learning before the week expired, that many hundreds of your class had determined to prevent the shipment of corn.*" And again:—"*As I said to many of you on Saturday*" (when he met his miners at Fowey Consols settings, with the object of pacifying them, inducing them to refrain from public disturbances, and settling wages with them) "*Bear, without breaking the law, your present distress; and I trust that a proper examination and comparison of the memorials presented last year, and this year, against the small protecting duty, will prove that the documents are in some measure contradictory, untrue, and afford no evidence whatever to shake that upon which the present law was based in* 1842; *and, therefore, miners, there is no just reason for changing the law then made.*" And again at the close of the letter:—"*Be patient and quiet, and I trust that the threatened evil will be averted.*"

After reading these extracts, it is impossible to doubt that it is Mr. Treffry's deliberate intention to imply that the distress under which the labouring population of Cornwall is now suffering, in common with a great portion of Europe, and the tendency to disturbance arising therefrom, are mainly connected with the question of the foreign ore duties! It should be remembered also, that this address is intended for the working miners of Cornwall; and that Mr. Treffry especially mentions that, in his interview with his own working people, when settling a question of wages with them, and endeavouring to induce them to refrain from *riot*, he addressed to them the same arguments—"As I said to many of you on Saturday." It is, therefore, clear that Mr. Treffry has endeavoured to excite in the minds of his own workpeople, and that he would willingly excite in the minds of the workpeople of the county generally—men comparatively uneducated, many of whom may look up to him as a guide and instructor—men already excited by privation and suffering, and apprehensive of still greater want—a feeling of animosity against those who take a different view from himself on a question of commercial policy! And in order to accomplish this almost malignant intention, he does not scruple to attribute to those with whom he differs, a portion at least of the effects of that awful calamity with which it has pleased the Almighty to visit many hands. With any other population than that of Cornwall, I should fear the effect of such an attempt to "deceive the people;" but the working classes of Cornwall, in good sense and intelligence, stand before any English people in a similar condition of life with whom I am acquainted; and I feel satisfied that there was not one of the working men into whose minds Mr. Treffry endeavoured to instil this mischief who was misled by it. For Mr. Treffry's own conduct in having made the attempt—wholly groundless as is the insinuation—so groundless and absurd that I would not waste a word in refuting it—I can only find excuse, or rather extenuation, by charitably supposing that, upon the subject of the protection of Cornish mines, he is liable to some sort of mental hallucination, under the influence of which he must have acted. Mr. Treffry's statistics, in reference to certain foreign and British mines, and the rather obscure inferences which he draws from them, I shall pass over without notice; for, in truth, I do not very clearly comprehend the force either of the original argument in favour of the repeal of the duty, which he imagines they were intended to support, or of his refutation. I would only observe, that I think the two Mexican silver mines, and the Norwegian copper smelting establishment, which form three of the five foreign mines selected, can have only a *remote* bearing on the subject, if they have any at all.

But, although I am convinced that the great body of the mining interest of Cornwall does not stand in need of any refutation of Mr. Treffry's arguments and assertions—and, although I am well aware that very many, I believe I may say, most, if not all, of the leading and intelligent miners in the county, have arrived at the conclusion, that the maintenance of the protective system is not necessary for the support of Cornish mines; and that if it had the effect of causing foreign copper ores to be smelted abroad, it would have a very injurious influence upon our mines; yet I think that a few particulars of the actual state of facts, in reference to the effects produced by the protective duties, of which I happen to be in possession, may be useful to those interested in the subject. I believe it is admitted on all hands—I believe, that if the question were put to Mr. Treffry, he even would admit—that if it could be proved, that the effect of the duties on foreign copper ores was to cause their conversion, either wholly, or to any considerable extent, into copper, elsewhere than in England, so as to establish a competition with English copper abroad, thereby depriving England of that mastery of the copper markets of the world, which, up to a recent period, she has enjoyed, the consequences would be most injurious to the Cornish miner, as well as to every other interest concerned. It scarcely needs argument to prove this; the Cornish miner is dependent upon the price of copper for the value he receives for his ores; England does not consume one-half the copper she produces—she is dependent upon foreign markets for the disposal of a portion even of her own produce, and more than one-half the copper smelted in England is the produce of foreign copper ores. Now if, not the whole, but a portion only of these foreign ores is driven to be smelted abroad, competition with English copper will be established in those foreign markets to which England looks for the disposal of her copper—the effect of competition is all the world over to reduce prices—the effect of reductions in prices, I need not tell the Cornish miner, is a corresponding reduction in the standard; and the Cornish miner is thus clearly and directly interested in maintaining, in England, the smelting of all the foreign copper ores which can possibly be brought here. If the effect of throwing difficulties in the way of smelting foreign copper ores in England would be to extinguish, or materially restrain, the production of such ores, the case might be different, although even then I cannot admit that such a course would be wise, or politic—but does any one, even Mr. Treffry, believe that this is the effect! I am convinced that no one seriously entertains such an opinion.

But what is the state of facts? When the duty was imposed in 1842, it was "avowedly an experiment"—no one knew what the precise effect would be—whether in fact the bulk of the foreign copper ores could bear the duty or no—whether it would lead to the smelting of copper ores abroad, or whether all foreign ores would, as heretofore, be brought to this country to be smelted—and the Government undertook to watch its operation. What, I repeat, are the facts? It is proved by the strongest evidence, derived from all quarters of the globe in which copper ores are produced, that, since the imposition of the duty in 1842, circumstances connected with the smelting of copper ores abroad have taken place which never took place before; and such evidence is increasing, and becoming stronger and more conclusive by every mail that arrives, whether from South America, from the United States, from Australia, or from the continent and northern Europe. It will readily be understood that the operations in very remote countries of a law passed here in the session of 1842 only, would not at once be felt here—consequently, for a short period no very perceptible effect on the import of copper ores into England was perceived; but, in the last two years, the import has rapidly declined—the falling off in the duty received in the last year of which there is yet any official account, having been 16,200*l.*, or 21 per cent., and this diminution in the import maintains and becomes every month more sensibly felt. It being thus established that a considerable proportion of the foreign copper ores which formerly came here to be smelted, are not now sent to this country, I will endeavour to show what has become of them. It is well known, to persons connected with South America, that, in the last two years, copper smelting-works have been established *upon the English system*, at Conception, in Chili, where wood and *coal* are abundant; these works are patronised and encouraged by the Chilian Government, who have granted them exemptions from duties, &c. they are in active progress, and are producing considerable quantities of copper, which have been sent to India, to France, and even to *Birmingham* (paying the high import duty); and the prices obtained have been equal to those of English copper. Smelting is generally being had recourse to by the miners in Chili, who are in every way encouraged so to do by the Government; and the production and exports of the copper known as South American slab, is largely increasing, both to India and China, and the United States.

Two circumstances, of which intelligence was received by the last mail from Chili, show conclusively the course which things are taking in that country in reference to smelting, and what the effect will be upon future exports of ores to England. An English house in Chili had very extensive contracts with certain miners, for ores to be delivered for shipment to England, at prices varying with the market. Agents for American houses were also in the market, buying both copper ores and copper for the United States, at higher rates than the English merchants, who had to deduct the duty payable here, could afford to give; the Chilian miners demurred to delivering their ores to the English merchants on terms lower than others were giving, whilst the English merchants could see no advantage in sending them to England, even at their own prices, and a compromise was, in consequence, effected—the Chilian miners agreeing to convert their ores into copper, at a certain rate, which the English house contracted at once to sell to an American mercantile firm, for shipments to the United States. The following extract from a letter, also received by the last mail from Valparaiso, will throw further light upon the course of events. It is from a partner in one of the most eminent houses on the west coast of South America, and is addressed to his partners in England. He says—"I think I told you that I sold for my brother in May a cargo of copper ores for Hamburgh; this mail brings the account of its being well sold to arrive in Hamburgh; the consequence is, they have bought another cargo, and require another in February. Hemmingway and Co. continue buying (ores) for the United States. Hemmingway and Co. bought another cargo of my brother last month for the United States. The Tocapilla Company are sending a cargo to Boston on company's account. I chartered a fine Danish ship for this cargo at 3*l.* 3*s.* to Boston. English ships to Swansea are 5*l.* and 5*l.* 5*s.* per ton. This alone is a great profit. I inclose a letter from General Alduarate, late Minister of War, by which you will perceive that he entertains no doubt of being able to get ceded to him the Island of Juan Fernandez, for the purpose of establishing smelting-works, with the privilege of importing ores, coal, bricks, iron, provisions, &c., from any part free of duty, and also of exporting copper free of duty. The south of Chili supplies provisions, coal, &c.; the north supplies ores. Bolivia supplies ores, and Peru also." How little did we think when devouring the adventures of Robinson Crusoe, that his beautiful solitude would one day possibly become a rival of Swansea in copper smelting! But to return: a previous letter, which I have seen, describes that a cargo of copper ores had been dispatched to Sweden. Now, here we have established the facts that copper ores have been, and are being, sent from Chili in considerable quantities, to the United States, to Hamburgh for Northern Germany, to Sweden, all for the purpose of being smelted. Who ever heard before the imposition of the duty in 1842, of copper ores having been sent to any one of these places? No one, I will answer for it; and, in addition, smelting is established on the English system at Conception, and is likely to be so at Juan Fernandez; and the smelting of copper by the old processes is being had recourse to along the coast of Chili, wherever wood or coal are accessible. What more conclusive evidence of the effects of the duty in encouraging smelting abroad can any man require, short of the absolute loss to this country of all the foreign ores; and if we wait for that amount of proof, it will be unnecessary to argue the question then, for all the arrangements in the world will not bring them back again.

But I have not yet done with my proofs of the effect of the duties in encouraging smelting abroad. Within the last two years smelting-works have been established, upon the English and German systems, at Baltimore and Boston, in the United States. They are in the hands of powerful parties, and it is to these works that the ores alluded to in the foregoing extract, have been sent to be smelted. Their chief supplies have hitherto been derived from the Island of Cuba, with which their communication is frequent and cheap; and if their smelting power were equal to it, they would, undoubtedly, receive a great proportion of the Cuba ores. These establishments are in their infancy—but we all know that the American is a very "go-a-head" personage, and that he does not readily abandon an enterprise which he has undertaken; and the progress which has been made in these works in the short period, during which they have been established, is remarkable. I have now shown how the copper ores, which England has *not* received since the imposition of the duty, have been, and are being, disposed of. It remains to show what has become of the copper so made by smelting abroad. It is not difficult to clear up this point. It has been variously distributed, but the largest proportion has gone to India and France. The falling off of the exports from England to these two countries, upon the average of the last two years, compared with previous years, is certainly not less than *three thousand tons of copper per year*. I feel sure I am under the mark, in stating this quantity. I think, that if any Cornish miner, who may not have taken that view of the subject, will carefully consider, and dispassionately weigh, the facts I have now stated, and their bearings, he will come to the conclusion, that our immediate remission of the duty on foreign copper ores is as important for the protection of his own interests, as a Cornish miner, as it is for the variety of other *British* interests, which are interested in bringing foreign copper ores to this country. There is not now time to enter further into this part of the subject, nor do I know that there is need; I have purposely endeavoured to treat it as a purely Cornish question, and as if there were no other interests to be consulted—but, were it necessary, I might put it to the good sense of Cornishmen, whether, even if they desired it, it is likely that this duty—*the sole remaining instance* of a duty imposed upon a raw material imported for manufacture, will be long allowed to remain a contradiction of the whole scope and tenor of the principles which are recognised and adopted by the Government and the country, in the regulation of our system of commercial policy? It cannot be, and I am quite sure that Cornishmen, and Cornish miners, generally take this view. The only question is, whether the duty shall be removed this session or next—a point, however, of great importance in effect, looking to the progress which smelting operations abroad are making, in raising up an opposition to this country, which every year's continuance of the duty will tend more firmly to establish, and make more difficult to contend with.

There is only one more point which it appears to me necessary to notice. Mr. Treffry, in his letter to Mr. Rashleigh, gives a few meagre details in reference to the range of the Cornish standard, in the year immediately preceding, and those subsequent to the imposition of the duty. The question, if entered upon at all, should be treated on a larger scale, and should compass a much greater number of years; and, if it were so treated, I am very sure that no reduction in the standard would be shown, which has not been doubly and trebly compensated by the reduced cost of working the mines, in economy of fuel, economy of labour, prices of materials, and in all the ingredients which enter into a mining cost.

Mr. Treffry, who would reject all evidence in favour of the repeal of the duties, which would not pass the ordeal of a "court of law," will no doubt say—"Where are your proofs?" I reply by anticipation, that the accuracy of all I have advanced is easily capable of being ascertained by any one who will give himself the trouble of making the inquiry, and who is willing to receive the truth. Official and public documents are the sources from which I have derived all that I have stated touching the imports of ore, and the exports of copper. The proceedings relative to the smelting of copper ores in South America and the United States, are known to all the leading merchants connected with those countries; and if Mr. Treffry doubts the genuineness of the communications which I have given from South America, he shall have such proof of them, and of many others to a similar effect, which even *he* will not venture to dispute. Mr. Treffry may think it enough, when he meets with a statement which he can neither disprove nor refute, to say "this rests on the evidence of merchants, and I believe all merchants to be liars." Let him do so; I am not afraid that he will have any followers in his belief; nor does he really entertain it himself. It is merely one of those mental half deceptions, which deceive neither himself nor any other person—one of those ancient prejudices, which he has deemed it becoming to adopt with a new name; but which, he does not see, suits as little the present times as the character of the "Baron bold in his lordly hall," suits the fortunate mining adventurer, who, as Mr. Austen, merited and received respect for his energy and perseverance. Such

whole under as he has bestowed upon the merchants and manufacturers of this country, as a class, is unworthy of notice. Upon the taste which dictated it, particularly in an address to the mining population of so eminently commercial a county as Cornwall, and proceeding, as it does, from a person closely connected with mercantile pursuits, it is needless to make a remark. I will only observe, that I hope Mr. W. Rashleigh, Jun., and Mr. Treffry's other neighbours, of the "country gentleman" class, will attach more importance to Mr. Treffry's compliment to their superiority over the merchants and manufacturers, than the latter will to his abuse of them.—A. B.: *January* 26.

PROTECTION TO THE CORNISH MINER.

TO THE EDITOR OF THE CORNWALL ROYAL GAZETTE.

SIR,—Whether the correspondent of the *West Briton*, who signs himself as "A. B." or "Y. Z.", is quite unimportant as to his identity, for he is too well known to be metamorphosed by a note of the Editor's—and, as the public were so lately reminded, by the ex tracts attached to my letter to Mr. Rashleigh, of the ability and assurance of the man to unsay all that he had then so recently said before—neither his abuse of me, nor his contradictions of what I have advanced, will weigh as a feather in his attempt to blind the Cornish miner as to his real interest. "A. B," in fact, by endeavouring to confuse others, has shown his own confusion; for, after declaring that he would "pass over without notice my statistics in reference to certain foreign and British mines, and the rather obscure inferences which I drew from them, &c.," he added, "I would only observe, that I think the two Mexican silver mines, and the Norwegian copper smelting establishments—which form three of the five foreign mines selected!—can have only a remote bearing on the subject, if they have any at all."

Now, Sir, all who read my letters without prejudice, without the dread that the facts disclosed in them would destroy the hopes of those whose object is their own gain even to the ruin of Cornwall, could not have had their intellects so obscured as not to know, that the last quotation applies to the statistics of the *Railway Herald*, and not to mine!—[See *Mining Journal*, Jan. 9.] But "A. B." wishes to make it appear, that if the foreign copper ores are not all brought to England for smelting, some of them will be smelted abroad, and that will create a competition with the copper in the hands of the English merchant, and consequently a fall in the price. Therefore, "A. B.," and the smelters generally, beg Cornishmen not to oppose the free import of foreign copper ores to Swansea, because it will destroy their competitors abroad, as if Cornishmen were unable to see that a glut of copper ores from abroad would produce a ruinous fall of the standard in Cornwall!

We don't deny the good policy of allowing ores of a certain high produce to be smelted in this country, under proper restrictions; and at present those restrictions are so low, that the ores in question cannot be smelted with the same advantage to their owners in any part of the world as here. Your republication of Sir Charles Lemon's coal statistics last week, would lead people generally to come to that conclusion; and I am prepared, when the proper time arrives, to prove it to a demonstration. In the mean time, I would remind Cornishmen that "A. B.'s" wish, to allow all the ores in the world to reach the smelting-works of this country without restriction, would be fatal to the Cornish mines.

He himself says, "the effect of competition is, all the world over, to reduce prices;" and yet, in the same paragraph, he says, "the Cornish miner is thus clearly and directly interested in maintaining in England the smelting of all the foreign copper ores which can possibly be brought here." Thus, so far as assertion goes, they would create no competition with the Cornish ores—the competition before alluded to being one among the merchants abroad: but an overstocked market, whether abroad or at home, must produce just the same consequences, and the Cornish miners have too severely suffered from the quantity of foreign ores already sent to this country. But, take off the duty, and there will be, as fast as shipping can be procured for the purpose, tens of thousands of tons of ores sent to this country, which are now excluded only by the duty. The withdrawal of the duty from spelter, as you properly stated, ruined all our zinc mines immediately. Our manganese mines were ruined in the same way. And why should our copper mines escape? since it is notorious that the foreign ores are generally three times as rich as our ores, and obtained at a much cheaper rate. The attempt of "A. B." to alarm the country about smelting abroad, would, on inquiry, appear perfectly fallacious—as I am prepared to prove to Ministers that the foreigner can pay a larger duty than he now pays for the benefit of smelting in this country; and that, whatever he may smelt abroad (particularly in Europe), where he has expensive freights to pay, is done at a loss.

It is always painful to answer charges made against one's self; but, to prejudice the public mind, "A. B." attacks me thus:—"Whilst the rest of the world have been advancing with rapid strides, he has been standing still." In answer to this, I might fairly ask "A. B.," if I stood still when, to stop the progress of the foreign mines at the call of his affrighted patrons—lest their rivals should establish rival smelting-works in Liverpool, and swamp the Cornish mines—I hurried off to London, and personally laid the facts which they had furnished me with before Ministers? What followed, and the prominent part which the smelters took in it to crush the Cuba Mines in their infancy, is too well known amongst the mining population in Cornwall to need repetition. It is also quite true, that when "A. B.'s" patrons and others found that they could gain more by smelting the foreign than the Cornish ores, they smelted more of them than *they themselves had asserted would altogether swamp the Cornish mines!* That, indeed, was "advancing with rapid strides;" and, as I "stood still," or remained firm in my opposition to the employment of slave labour to the destruction of the comforts which the Cornish miner had previously enjoyed, and to the impoverishment of Cornwall—it is quite clear that, "if all the world has deserted the Cornish miner, even *those* who were *formerly his truest friends*," I have not!

But, have I done nothing to aid the Cornish miner, and to add to the wealth of Cornwall? Previous to the discovery of ores in Crinnis Mines, in 1811 (although I had refused to take any interest in the mine, being acquainted with the ruinous system under which she was working), through my advice and assistance, a water-course for her was obtained at a nominal rent, and by other assistance which I partly rendered, the riches of that mine, which had been previously condemned by miners in general, were discovered. That discovery led to the discovery of other adjoining mines, and to those in Tywardreath parish, which latter, even "A. B." will not dispute my having saved and re-established, whilst all others, who had anything to lose, had deserted them. Yet, from these and the adjoining mines, also put on at my own responsibility, and nearly at my own risk, ores to the value of 2,000,000*l.* sterling have been added to the money circulation of that previously poverty-stricken neighbourhood. A much larger sum from the Crinnis and adjoining mines has been also added to the wealth of St. Austell parish; the inhabitants of which, between 1811 and 1814, increased from 3686 to 10,179; and those from the adjoining parishes, St. Blazey and Tywardreath, during the same period, from 1182 to 6347. And how has all this wealth been expended? Why, in trebling the value of all the property within the ambit of the three parishes—in the increase of shipping—for the general benefit of landlords, tenants, manufacturers, merchants, tradesmen, and labourers. And are the smelters, for their individual gain, and the foreign miners, and the slaves who enrich them, to put an extinguisher upon all such wealth and prosperity? though the numbers here mentioned, and the span they inhabit, are as nothing when compared with the population and extent of the whole mining district of Cornwall! In 1842, when those parties had influence enough to induce Ministers to alter the law, the necessity of employing the smelters had been so misrepresented, that Ministers talked more about it than that of employing the miners, until I showed them, that if one additional smelter was employed in smelting foreign ores, he would smelt enough to displace from employment 56 people then engaged in our home mines!

In Cornwall, the copper ores sold at the public ticketings in 1832, amounted to 152,654 tons, which produced in money, 936,492*l.*; whereas, the foreign copper ores, sold at Swansea, during the same period, amounted to but 66 tons, producing in money 536*l.* From that time onwards, mining met with such small encouragement in Cornwall, that though, in 1840, the foreign ores sold had then increased beyond those sold in 1832 7400 tons, and the money they sold at had also increased 607,971*l.*, the Cornish ores only exceeded those sold in Cornwall in 1832 by 15,628 tons, and produced in money only 49,832*l.* beyond the Cornish ores in 1832. This frightful increase of foreign ores induced me in that year to endeavour to awake the county to a sense of the danger which our mines were in, and, after stating what first caused the mischief, and many of the evils which the Cornish miner had suffered from it, I then added—

"Now, it is beyond dispute that our home market is the great consumer of our manufactured goods; and I will briefly shew, that if the shipping interest of Liverpool gained by the bringing of foreign ores to this country for smelting, the coasting trade of Great Britain has suffered by it in, perhaps, a greater degree. In the first place, no foreign vessels are employed in that trade; and as the foreign ores are, on an average, fully three times as rich as the English or Irish ores, a vessel laden with 500 tons of foreign ores would just do the same work that would require 15 of our average-sized coasters to do; the return cargoes, by which would consist of coals for pumping the water from our mines, or otherwise carrying on their operations, and coals for dome tic purposes at such a cheap rate, that almost all the housekeepers in Cornwall are benefitted by the mines producing the out-freights; besides, culm for our malt and lime-kilns, also at such a moderate price, that lime constitutes the principal manure of the Cornish farmer on the eastern part of the south coast, and the adjacent interior parts of Cornwall. I need not mention the number of trips that our coasters would make to Wales and back, whilst a large ship was returning from a distant part of the would with such ores, because the fact is well understood. And, as an admixture of our poorer ores is required with the foreign rich ores to produce real good metal from the latter, with proper and moderate restrictions on the smelting of such ores in this country, we need not fear foreign rivality.

"But I have not said enough to satisfy all who doubted the fact, that the well being of our copper mines is identified with the general prosperity of the county, probably, a reference to the receipts at the Custom-houses, in good and bad years of mining, will prove, that not only is the prosperity of our mines beneficial to Cornwall, but to the country at large. In 1809, the whole receipts of the Custom-house for the Port of Fowey amounted to but 2425*l.*—mining at that time, in the eastern part of Cornwall, was in its infancy, and all the copper ores shipped from the Port of Fowey in the same year, amounted only to 148 tons. Mines, however, soon after that period fast increased, and the trade of the port generally continued increasing till 1837, the port receipts in the previous year having amounted to 25,522*l.*; but in that year the standard of copper ores were so much higher than in 1829, that though in the latter year 16,110 (21 cwts.) of copper ores, or in metal, 1264 tons (16 cwts.) were sold beyond the quantities sold in 1836 at the Cornish ticketings, the amount of money made of the ores sold in 1836, exceeded the amount of the sales of the much larger quantities of ores in 1829 by 140,561*l.*; whereas, had the ores in 1829 sold at the same standard that was given for ores in 1836, the difference to the county would have been a gain of about 370,000*l.* The result, therefore, of such loss was almost the entire stoppage of speculation in Cornish mines, more than two to one of those sending ores to the public ticketings during the last year having encountered losses, to an extent altogether exceeding 60,000*l.* Trade, consequently, became much stagnated; and the receipts of the ports within the mining districts of Cornwall were diminished in proportion to those of Fowey, where the whole receipts of 1839 amounted only to 9106*l.* the total loss must have been of a serious amount to the Government.

"How much of the 1,019,601*l.* 15*s.* raised by the sale of ores at the Cornish ticketings, during the year 1836, was actually circulated through the county as the mere expenses of working the mines, independent of the profits, one may form some idea by the fact, that out of 93,190*l.* 8*s.* 9*d.* received for ores sold from Fowey Consols in 1838, the expenses of the mine were 76,691*l.* 16*s.* 3*d.*, of which 16,311*l.* 4*s.* 6*d.* were paid for materials, and nearly all the rest of the money for labour, supporting thereby a surrounding population of more than 7000 souls, principally through the earnings of 1734 people daily employed on the mine. Whereas, if by British capitalists the same number of people were employed in a foreign mine, the benefit of the principal item—viz., that of wages for their maintenance,—would be entirely lost to this country! I hope that I have now shown the importance of the copper mining interest to the county of Cornwall—if not, most of the farmers in the eastern part of Cornwall are aware, that owing to the poverty of the miners, they had, during the last spring of the year, to keep their fat cattle much beyond the accustomed time, because the usual demand for supplying the mining population in the west had almost ceased to exist. Too much has been, unfortunately, obtained from Government in latter years by agitation—but my object is, by a statement of facts, quietly to awaken those who have an interest in the well-being of Cornwall to her real situation; and to ask if some check be not given to the importation of rich foreign ores, how Government intend to suppress the agitation likely to be produced by tens of thousands of suffering miners?"

Now, to show how the facts stated in the above quoted letter are borne out by the proprietors of the largest smelting establishment in the kingdom, and those best acquainted with mining and smelting in Cornwall, I have copied the following extracts from the memorials presented to the Prime Minister and the Board of Trade, by the deputation appointed to represent the mining interest of Cornwall, after the announcement of the new tariff in 1842.

"That not only is it of great importance to Cornwall that the produce of the mines should be protected, but the consumers of the metals are equally interested in supporting those mines, so as not to be dependent for a supply on foreign countries at so great a distance. That as it is an acknowledged principle of Government, that the interests of the various classes of the community are interwoven with each other, it follows that the protection thus afforded should not be partial but reciprocal.

"That as one-third of the inhabitants of the county are dependent upon mining for their support, your memorialists are largely contributive to the maintenance of other interests, especially of the agricultural, shipping, and mercantile; and by working their mines at a much greater expense for the provision of the labourers that falls upon their foreign rivals, they are entitled to protection against such unequal competition. That her Majesty's Government having distinctly recognised the principle in relation to other commodities, that the produce of slave labour shall not be privileged by being brought into unchecked competition with that of free labour, and that as a large proportion of foreign ore is raised by the labour of slaves, your memorialists rely with confidence upon the same humane policy being opposed to its free admission into this country, as is employed to control the commerce in other articles produced by slave labour.

"That the average produce of British ore being not above 8 parts of copper in 100, and generally obtained from deep mines (some of them above 1600 ft. below the surface) and at a great expense, it is impossible for it to compete on equal, or nearly equal terms, with ore containing above 20 parts in 100, found at a comparatively small depth; and it appears to us, that any duty on foreign ore, which shall be less than the extra expense of smelting it elsewhere, must operate as a direct encouragement to foreign mining; and every ton of rich ore thus raised in foreign countries will stand in the place of about 3 tons of ore in Britain; for there is, undoubtedly, copper ore enough in Cornwall alone, to supply any imaginable increase of demand, provided that encouragement be given to mining.

"That on the whole, therefore, we respectfully, but confidently submit, that if the British miner should obtain a duty on foreign ores at 10*l.* a ton on the metal in the ore, whatever may be the produce, it will not have the effect of driving the foreign miner to smelt his ores in any other country. That we have only to add in respect to copper, that at the duty we have suggested, the revenue will derive a very large increase of income, without the slightest risk of the ores being smelted elsewhere.

"That the large capital which has been invested in the mines on the faith of protecting duties, and the interests of the lords of the soil, as well as of numerous merchants, tradesmen, shipowners,* and others, whose business is dependent on the mines, deserve attentive consideration; whilst the risk to the consumer of having eventually to depend for a supply on a foreign and distant country, ought not to be forgotten: but above all, the probability of some thousands of intelligent and well conducted workmen being thrown out of employment, and driven with their families from their houses, is sufficient to create alarm in the minds of all who are connected with Cornwall."

The foregoing facts cannot be successfully disputed; and if Sir C. Lemon's statistical account of the coal fields had not appeared, I would have shown the loss which the foreigner must sustain if he smelts ores on the continent. If "A. B.," and those connected with him, for the purpose of duping us, were not well aware that the smelting of foreign ores on which so much hinges. We proved it in 1842 at the special request of the Board of Trade, and satisfied the Government that, if we had a much higher protecting duty, the foreign ores would still come here; and that is the ground which we must still take. The smelters and others, interested in foreign ores, by their unconstitutional influence, obtained an alteration of the law in 1842; and after the Government had given to us notice of the proposed protection which the British mines were to have, such was the influence of our opponents that, at their request, Government was induced to reduce that protection to one-half, before the prayer of Cornwall could be heard!

It is, therefore, with a very bad grace that the very concoctors of the law, to serve their own purposes, after having thereby thrown down the standard of copper ores from 120*l.* to 104*l.*, should now seek to alter it, and to expose the British mines to a ruinously unprotected competition with the whole world—by, as Adam Smith lays it down, a misapplication of capital; for he says—"when capital is employed in exchanging one description of the produce of national industry for another, it then supports as great a portion of industry as can be done by any capital employed in commerce. When it is employed in exchanging the produce of national for that of foreign industry, half of it goes to the support of foreign industry." And he also adds—"Capital can be best employed in cultivating and improving the earth, or, in other words, in multiplying its rude produce."

The continued fall of the standard from the altered law in 1842, corroborated what the deputation represented to Ministers would be its effects; and some idea of the loss which the county thereby sustained, may be guessed at by the fact, that the ores from two mines only, of which about three parts belong to myself, and are under my direction, sold in 1844 for 26,277*l.* less than they would have sold at the year before the tariff took place!

Not to mention that had not the prices been so reduced, a much greater quantity of ores would have been raised, as miners could not make wages in raising low-priced ores in deep mines; their earnings, as I have shown in former letters, having fallen, with the fall on ores, to the lowest ebb. With all these facts to prove what mischief an unrestricted importation of copper would produce, I cheerfully appeal to Cornishmen whether, if required, they would not, through the whole length and breadth of the county, rather petition her Majesty's Ministers to protect them from the evil than see wide-spread ruin overwhelm the whole face of their once prosperous county. I say "if required," because I can never believe that Ministers, when they learn the true state of the case, will ever pass an Act which will bring on many thousands of Cornishmen a state of destitution, perhaps, equally severe as that which afflicts the sister kingdom.

I now beg, Mr. Editor, to thank you, and I am sure that the mining interest will do the same, for the interest with which you have always advocated a cause with which the prosperity of Cornwall has been so identified from the earliest times; a cause which, if any public journalist in this county had attempted to undermine 20 years ago, his days as such journalist would have been immediately numbered.—J. T. TREFFRY.

Place, Feb. 16.

* There are now employed at least 20,000 tons of shipping, and 1200 seamen in conveying copper ores from Cornwall to Wales, and bringing back from Wales, coals, iron, &c., to the Cornish mines.

Mining Correspondence.

ENGLISH MINES.

CUBERT SILVER-LEAD.—The sumpmen having fixed the cistern and bearer below the 35 fm. level, they are now engaged sending down the 16-in. lift. The lode in the 25 fm. level, going west, is from 2 to 3 ft. wide, chiefly composed of rather a hard spar, spotted with lead, but, on the whole, poor at present; in this end we have recently cut a large stream of water, enough for a 10-in. box to discharge; in the eastern end, in that level, the lode is 4 ft. wide, carrying a leader of lead; but, on the north and south lode, about 3 in. wide each—this end is passing through good tribute ground. In the 15 fm. level, going west, there is also a large lode, but just now unproductive, and exceedingly wet; the eastern end here is a pretty gossan, 2 ft. wide, with a leader of lead on the south wall, about 3 in. wide. The tributers are all working regular, and very well; I have been through their pitches to-day, but see nothing particular to notice.—R. ROWE: Feb. 20.

BARRISTOWN.—In the 23 fm. level we have lost the lode; the ground is so much broken and cut up, that we are not able at present to say what it will do. In the 18 fm. level end west, we have not taken down the lode since my last; a party of tributers are stoping the back a few fathoms behind this end—have a lode worth from 20*l.* to 30*l.* per fm. We have no change in the 24 and 28 fm. levels; we hope to communicate the 28 fm. level, 18 fms. west of flat-rod shaft, with a winze sunk from 18 fm. level—this will underwater the bottom of 18 fm. level; in driving through this piece of ground we had a good course of ore, but in the bottom of the level a slide intersected the lode, under which we have not yet seen; the winze being sunk perpendicularly, the 12 fm. end is rather improved, worth at present about 12*l.* per fm.; the rise behind this end is worth from 16*l.* to 20*l.* per fm.; the pitches in the south part of 18 fm. level continue to look well.—T. ANGOVE: Feb. 19.

BEDFORD UNITED.—At Wheal Marquis, the lode in the 80 fm. level east is 3 ft. wide, and worth 30*l.* per fm. In the 70 fm. level east, the lode is 2½ ft. wide, producing good saving work. The lode in the 58 fm. level east is 15 in. composed of spar, mundic, and spots of ore in places. At Wheal Tavistock, there is nothing new in the ends or winze, the lode still producing good stones of ore, and very kindly. We intend taking most of the men from these levels so soon as the engine-shaft at Liscombe Old Mine, about 70 fms. deep, is cleared and secured to the deep adit, about 60 fms. deep, to prove the south lodes, which are very kindly indeed at the surface. The lode in the south engine-shaft is 3½ ft. wide, composed of gossan, spar, and ore, 1 ft. of which is good work. In the adit level east, the lode is 3½ ft. wide, producing saving work. On the whole our prospects are altogether more favourable.—J. PHILLIPS: Feb. 28.

CALLINGTON.—In cross-cutting towards the silver-lead lode, in the 126 fm. level, we find the ground favourable. In the 112 fm. level north the lode is much the same as when last reported on—15 in. wide, intermixed with fluor-spar and silver-lead ores; spots of grey and ruby silver have been met with here; in the south end the ground is very hard, lode intermixed with silver-lead ores. In the 100 fm. level south we have met with a cross-course dipping north towards Johnson's and Vivian's lodes—the two latter dipping southward, being to the north of the former; the silver-lead lode is intermixed with chlorite, and has a very good appearance—the back will set at a moderate tribute; in the north end the lode is small and poor. In the 90 fm. level, both north and south, we are opening tribute ground. In the 80 fm. level north we have intersected a cross-course, the same as the deep adit is driven on, to Huridown; the ground is favourable, with a good branch of silver-lead ores. At the north mine, in the 100 fm. level north, the ground continues soft, the lode is small, producing silver-lead ores; the south end has been suspended for a short time—the men being now rising to the level above; the ground we are opening will set at a low figure. In the 90 fm. level north the lode is small and poor; driving south, to the east of the cross-course, after Kellybray lode, in this level, we have intersected a number of branches, composed of chlorite, mundic, felspar, and spots of copper ores; from present appearances, we are getting to the south of them, and shall at once turn house on the largest—the ground here being more favourable; the copper lode, in this level, is 2 ft. wide, promising, with stones of copper ores. In the 70 fm. level, on this lode, we have intersected a branch of the cross-course. In the 40 fm. level east, Kellybray lode looks more promising and regular—the ground is favourable: in the north end the ground is soft, lode spotted with silver-lead ores. At Kellybray, we have erected a horse whim—the water in the shaft, which is 6 fms. deep, being rather quick, occasioned by the late snow and heavy rains; we now calculate sinking 9 ft. a week. Our last parcel of ores (100 tons) has sold for 21*l.* 7*s.* 6*d.* per ton.—J. T. PHILLIPS: Feb. 22.

DRAKE WALLS.—The engine-shaft is producing saving work. In the stopes, east of engine-shaft, good work. In the end, east of engine-shaft, in the 40 fm. level, under the arch, very good branches of tin. The ends, both east and west of machine shaft, in the 50 fm. level, are producing good saving work, but the ground hard for driving; in the stopes, east of machine-shaft, good saving work. The end, east of machine-shaft, in the 33 fm. level, under the arch, is poor, being still disordered by a cross-course; the ground, being in an unsettled state, destroys the branches also. This will not continue long before the ground will become more compact, and the branches regular, as may be seen in level above—so much for the western part of the mine. We have still four men in the eastern part of the mine, which are quite sufficient to supply our new stamps, and, if anything more is done in this part of the mine, we must increase our surface power. The tributers have only just now finished stamping, and we have all the tin ore of two months' broke to bring to this stamps. The tributers will have about 5 tons of tin, and will be ready to sample in about a fortnight. We have shipped for Truro computed 16 tons of tin—viz.: 5 tons 5 cwts., price 57*l.* 10*s.*; 5 tons 15 cwts., 56*l.*; 4 tons, 47*l.*; 1 ton, 33*l.* Mr. Johnson has been here, and wishes to know if we cannot get more men at work while the price of tin is so high, and stated your anxiety on the subject; but I see no means at present of doing so, without making a great sacrifice of money. Could I see any means of doing so to advantage, I would at once carry it out; but, believe me, I am doing all in my power to increase our returns. I believe we shall spend from 50 to 60 fms. of ground this month in the western part of the mine, which will more than pay our cost, and shall go on to increase our returns; and I believe I am correct in stating, that before the end of the present year, our returns will be 100 fms. per month—and I believe, too, we shall do this without increasing our working expenses more than 100*l.* per month above the present expenses of working now: should our ground turn out as well as at present, and I see no reason why not, from all the ground laid open, and as far as can be seen, we shall make good dividends, if we can get a fair price for tin. I have suggested to Mr. Johnson, for your satisfaction, that some competent person be called in to inspect the mine, and see if any facility can be given to our underground operations, in order to increase our returns with prudence. If so, I shall be most happy to carry out such operations; meantime, I beg it may be a man of the best practice.—R. WILLIAMS: Feb. 20.

DEVON AND COURTENAY.—The ground in the engine-shaft still continues hard. The deep adit, on south lode, as last reported; I have taken the men for a few days, to assist the carpenter in fixing stands and pullies for the flat-rods. The ground in the shallow adit, on north lode, still continues favourable, lode 3 ft. wide, with some lead, but not worth saving. The lode in north shaft is 4 ft. wide, with some good stones of copper ore in places; the water is increasing, and we shall commence putting down the pumps on Friday, and by that day week, I hope to get the rods to work; after the rods are working, I shall call it the flat-rod shaft, on north lode.—J. JOB: Feb. 28.

EAST COOMBE.—The lode in the adit level, which has been driven on some 50 to 60 fms., is very regular, but generally small, varying from 3 to 9 in. wide, composed of gossan, spathose iron, and lead in places; the strata killas is of a soft texture, congenial for lead and silver ore. It is very evident, from the openings at the 10 fm. level, that a quantity of ore must have been extracted, and more particularly from the size of the lode visible in the bottom of the 10 fm. level, where it appears they stoped the bottoms 1 to 2 ft., near 20 fms. in length—being prevented going deeper from the quantity of water met with—extra power being required to develope the mine at a deeper level, as the lode in the bottom of the 10 has materially improved in size and quality; it is 2 ft. wide, with a leader of ore rich for lead and silver, from 4 to 6 in. big; the component parts of the lode, independent of the leader, is white iron and quartz, impregnated with lead and silver ore, giving about half a ton to a fathom—therefore, as you have a good perpendicular shaft, which will intersect the lode at from 45 to 50 fms. deep, taking the present underlay for granted, I would advise you to press on the 20 fm. level, both east and west, with all possible dispatch to get under the shoot of ore alluded to in the 10, which appears to have a dip in a westerly direction at an angle of 24°. I would also advise you to cross-cut north, in the 20, to intersect the north lode, which I think you will arrive at by driving 10 or 12 fms.; this lode, when seen in the wheel-pit, appears to be a champion lode, and possessing strong indications of the same description, as the south lode, is precisely the same strata; your wheel, 36 by 4 ft., with all the appendages, is done in a workmanlike manner, and capable of allowing you to extend the scale of operations to such depth, as will prove the mine effectually, and no doubt beneficially to yourself and co-partners.—J. CARPENTER: Feb. 28.

EAST CROWNDALE.—In the past week we have sunk in the new engine-shaft 5 ft. 6 in., the ground continues pretty much the same as when last reported upon. At Rix Hill, we have cut through the south lode to the north wall, which evidently shows the underlay to be south; in clearing up the old men's workings, on the lode still further east, we find the lode to hold on in regularity and size, and have broken some portion of the lode with good spots of tin in it, but, from the accumulation of surface water, we cannot at present do anything more in this place to advantage towards shewing the character of the lode. P. N. Johnson, Esq., has to-day inspected our operations, and decided that a shallow adit be brought up to unwater the old men's workings at about 10 fms. deep; which we shall proceed about at once. We have not as yet cut the lead lode, on the eastern part of our sett; the ground has been good for sinking the past week, but we have to-day cut some water, which I fear will impede our sinking—our engine and pit work all in good order.—S. PAUL: February 20.

EAST TAMAR CONSOLS.—At Whitson, we have cut the lode in the 60 fm. level, it is 20 in. wide, work of a good quality. In the 54 fm. level north, the lode is 18 in. wide, saving work; in the 54 fm. level south, the lode is 2 ft. wide, producing good stones of silver-lead ore. We have commenced driving the 46 fm. level south, the lode is 1 ft. wide—fluor-spar, and silver-lead ore. At Furzehill, the lode in the 46 fm. level north is 2 ft. wide, saving work; in the 46 fm. level south, the lode is 20 in. wide, producing good work. In the 38 fm. level north, the lode is 15 in. wide—fluor-spar, and silver-lead ore; in the 38 fm. level south, the lode is 2 ft. wide, a very kindly lode. Our stamps are working well with the 24 heads; I expect the crusher will be in course for crushing in a few days.—B. ROBINS: Feb. 28.

GREAT MICHELL CONSOLS.—The lode in the winze, west of the engine-shaft, is principally mundic and spar, intermixed with black and yellow ore; the water during the past week has increased—consequently, the sinking is at present suspended. The lode in the engine-shaft, now 8 fms. below the 22 fm. level, is producing rocks, composed of ore, fluor-spar, and mundic.—THOMAS RICHARDS: Feb. 22.

GUNNIS LAKE.—At Chilsworthy, the lode in Bailey's engine-shaft is 3 ft. wide, composed of gossan and spar, with stones of ore in places. The lode in the 12 fm. level west is without alteration; in this level east, we are still driving south in search of the lode.—W. RICHARDS: Feb. 23.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, is 2 ft. wide, producing saving work—a kindly lode.—P. RICHARDS: Feb. 28.

HOLMBUSH.—The ground and the branches in the diagonal shaft, sinking below the 120 fm. level, is much the same as last reported on; the lode in the 120 fm. level, west of the great cross-course, is 1 ft. wide, composed of capel, mundic, and spots of ore; the lode in the stopes, in the back of this level, is 16 in. wide, and worth 30*l.* per fm.; we have also commenced driving the 120 fm. level, east of Hitchins's shaft, on the north part, where the lode is 1 ft. wide, composed of spar, a great quantity of mundic, and stones of ore. The lode in the 110 fm. level, west of the lead course, is small and poor; the lode in the 110 fm. level south is 2½ ft. wide, composed of hard spar and spots of lead; the lode in the winze, sinking below the level between the great cross-course and the slide, is still in disordered ground. The lode in the 100 fm. level south is 2 ft. wide, composed of spar, prian, and lead, and at present is worth 20*l.* per fm.—but this lode has hitherto been so bunchy and uncertain, that we have need to be cautious how we report on it. The lode in the 90 fm. level south is 20 in. wide, composed of spar, prian, flookan, and sprigs of lead.—WILLIAM LEAN.

KIRKCUDBRIGHTSHIRE.—In sinking Stewart's shaft, under the 30 fm. level, the lode is 4 ft. wide, producing 1 ton of ore per fm.; the lode in the end west, at the foregoing level, is 4½ ft. wide, producing 1 ton of lead per fm.; the lode in the end east, at this level, is also large, with a mixture of lead in it; the stopes in the roof of this level continue to look well. The lode in the end, driving east in the 20 fm. level, is large, from 4 to 5 ft. wide, and producing one-third of a ton per fm., with indications of an increase. I am happy to say the drawing apparatus and railroad answers the purpose most splendidly; the frost having gone, we are now going on with dressing as vigorously as possible.—J. BUZZO: Feb. 29.

LLANCYNFELIN.—In the 18 fm. level east the lode is small and unproductive at present; in the east stopes, in the back of the 18 fm. level, the lode is 2½ ft. wide, producing good stones of lead ores; in the west stopes, in the

13 fm. level, the lode is 2 ft. wide, yielding stones of lead ores of an excellent quality. In the east stopes, in the back of the 8 fm. level, the lode is 1½ ft. wide, worth 12*l.* per fm.; in the west stopes the lode is small, but producing good ores; we are very near to the cross-course, which will account for the smallness of the lode; in the rise, in the back of the 8 fm. level, the lode is 3 ft. wide, worth 8*l.* per fm. In the winze, in the bottom of the 13 fm. level, the lode is not taken down; in the footway, the winze in the bottom of the adit, the lode has been very productive for 12 fms. stripping down; but at this point we came upon a bed of spar, reducing the lode to a very small size; we have abandoned stripping, and placed the men to stope down all the lode. I hope we shall communicate the cross-cut in the 18 fm. level to the engine-shaft in about five weeks, which will be of great advantage to the mine. In Jones's land, we have brought a lobby to the adit for a distance of 60 fms., but we are not yet in a settled country; the drawing-lift will be in operation the beginning of the ensuing week; and the stamps and rods to Pearon's are being dispatched with all possible speed. We are making preparations for resuming the sinking the engine-shaft, and expect to sample in a fortnight about 50 tons.—JOHN TREWEEK: Feb. 28.

LEWIS.—The lode in the 60 fm. level end east is 18 in. wide, worth 5*l.* 10s. per fm. for tin, and very promising; the lode in the 60 fm. level west is 2½ ft wide, producing some tin, and very kindly. The lode in the 50 fm. level east is 18 in. wide, yielding some tin, with a very promising appearance; the lode in the 50 fm. level west, on south branch (or new lode), is 2 ft. wide, worth 5*l.* per fm. for tin. The lode in the 40 fm. level end east is 18 in. wide, worth 7*l.* per fm. for tin; the lode in the winze, sinking under the 40 fm. level, on south branch, is 4 in. wide, worth 40s. per fm. for tin. The lode in the 30 fm. level east is 2 ft. wide, worth 5*l.* per fm. for tin. We expect to have for sale the coming week about 10 tons of tin.—S. S. NOBLE: Feb. 20.

MENDIP HILLS.—The ground in the 38 fm. level, south of shaft, is become rather harder for driving than we have had it, the lode is about 9 ft. wide, composed of soft white spar, dark-coloured flookan, and spots of lead; in Stainsby's shaft we are getting down as fast as possible—the appearance of the lode continues much the same, composed of quartz, iron, and flookan, with particles of lead in places, down 15 fms. 3 ft. below the 38 fm. level. In the slag department we have not opened the trench but very little further up the valley since my last report, although we have broken some very good slags. I have been obliged to remove the men back, in order to widen the trench on the top. In consequence of the frost and rain, during the past week, some small quantity of the rubbish from the top fell in—this being nearly completed, I hope shortly to commence opening the trench again in new ground.—F. C. HARPUR.

NEW EAST CROWNDALE.—We are continuing on the course of the lode in the 14 fm. level; it is getting larger as we extend east, as I anticipated, from a large lode opened on 40 fms. east of engine-shaft; the lode is 4 ft. wide, composed of pesch, mixed with white prian, and large portions of mundic, with spots of copper ore, with variegated stains, by the water issuing from the lodes, being porous, showing a great probability of its being large and continuous.—JAMES CARPENTER: Feb. 25.

SILVER VALLEY.—The engine-shaft is now down 5 fms. 3 ft. below the 40 fm. level, and the ground is without any important alteration. The silver lode, in the 30 fm. level, driving east, is divided into small branches, with traces of silver-lead ore in places; in the stopes, in the back of this level, the lode is 2 ft. wide, at present unproductive; and the lode in the stopes, in the back of this level west, is small, containing a little silver. The lode in the 20 fm. level, driving west, is very much improved in the past week, it is now about 2 ft. wide, 6 in. of which is rich silver work—this we are carefully saving in bags, and the remainder we are saving to be dressed; this end is about 30 fms. from the adit level, driven east from Callington Commons; and from the many promising indications in several fms. of that level, and in the 10 fm. level, which we have driven over this, together with the situation of the lode in the valley, we expect that we have before us a valuable piece of silver ground. In the 10 fm. level east the lode is split into two parts by a horse of killas, and is disordered. At Callington Commons, in the adit level, driving west, there is but little alteration since last report; the lode is composed of flookan, carbonate of iron, and mundic. We shall have prepared for market by the end of this week about 2 tons 2 cwts. of silver ore, and about 4 tons of tin.—S. RICHARDS.

SOUTH DOLCOATH.—I am glad to inform you, that the lode in the 20 fm. level west has very much improved in size and appearance during the past week; more copper ore has been seen in the lode this week than was ever seen in it before below the adit. I think you will recollect from being on the mine yourself, and from what I have told you from time to time, that the large cross-course which intersects all the lodes to the north, lay to the west of our engine-shaft—of course the 20 west is approaching it; I hope we shall find the said cross-course will have the same effect on South Dolcoath lode as on all other lodes which it has intersected: Wheal Seton is on the same cross-course.—Feb. 20.

SOUTH TAMAR UNITED.—The men in the adit level have cleared and secured 10 fms. since last report. I expect the engineers will commence heaving in the machinery in a day or two.—B. ROBINS: Feb. 23.

SOUTH WHEAL TRELAWNEY.—Sobeys's shaft, in the adit south, is 2 ft. wide, composed of white killas and a great deal of gossan, with a kindly appearance; the ground in Snell's shaft is favourable for sinking, water quick, and have not seen so much sprigs of copper as last week.—W. JENKIN: Feb. 22.

TRELEIGH CONSOLS.—In Christoe's shaft, below the 100 fm. level, we are sinking in the country—this will be completed to the 110 fm. level next week. In the 100, east of ditto, the lode is 2½ ft. wide, more promising, with good stones of ore; in the 100, west of ditto, we are driving south-west in the country. In Garden's shaft, below the 90, sinking in the country, the ground is very hard, in elvans, and also very wet; in the 90, west of Garden's shaft, lode 2 ft. wide, producing good stones of ore. The rise above holed to winze below the 80. In the 80, west of ditto, lode 3 ft. wide, with good stones of ore, not to value; holed to rise above the 90; in the 80, east of ditto, lode 20 in. wide, worth 12*l.* per fm. In the 70, west of ditto, lode 20 in. wide, producing a small quantity of ore. In the winze, below the 60 west, lode 20 in. wide, with stones of ore—this is 30 fms. west of Garden's shaft, and will be on the 70 end. In the 70, west of Good Fortune, lode 3½ ft. wide, worth 10*l.* per fm.—this is 3½ fms. east of Symons's shaft more to drive. In Symons's shaft, below the 60, lode 4 ft. wide, producing good stones of ore, not to value. In the 44, west of Symons's, lode small, no mineral. In the 20, west of ditto, lode 22 in. wide, worth 6*l.* per fm.—W. SYMONS: Feb. 20.

UNITED HILLS.—In the 90 fm. level there has been nothing done for the past week, in consequence of the water being in. In the 80 fm. level, eastern end, the lode is 2½ ft. wide, worth 18*l.* per fm.; west of cross-cut the lode is 18 in. wide, worth 12*l.* per fm. In the 70 fm. level, east of eastern shaft, the lode is 3 ft. wide, worth 6*l.* per fm.; in the stopes the lode is 3 ft. wide, worth 20*l.* per fm. In the 60 and 50 fm. level, no tutwork; in the shallow adit the lode is 3 ft. wide, worth 8*l* per fm. At Wheal Charles, in the 50 fm. level, the lode is 2½ ft. wide, producing some stones of ore. In the 40 fm. level, eastern end, the lode is 2 ft. wide, worth 12*l* per fm.; the lode in the winze is 6 ft. wide, worth 14*l.* per fm.; in the stopes the lode is 3 ft. wide, worth 18*l.* per fm. At Wheal Sparrow, in the 40 fm. level, the ends are communicated; in the course of a day or two, we shall commence driving this level, west of Turner's shaft. In the 30 fm. level the lode is 3 ft. wide, worth 9*l.* per fm. In the 20 fm. level, no tutwork; in the adit level the lode is 1 ft. wide, poor.—T. TREVENEN; R. WILLIAMS: Feb. 23.

WEST WHEAL JEWEL.—In the 115 fm. level east, on Wheal Jewel lode, the lode not taken down in the past week; when last taken down, worth 4*l.* per fm. The winze, in the bottom of the 100 fm. level, on the same lode, the lode is 20 in. wide, producing better ore, a promising appearance. In the winze in the bottom of the 85, west of cross-cut, on the same lode, the lode is 1 ft. wide, worth 3*l.* per fm. The 70 fm. level, west of Williams's cross-cut, on the same lode, not taken down in the past week, worth 9*l.* per fm., when last taken down. In the 12 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 20 in. wide, worth 15*l.* per fm.; in the winze, in the bottom of this level, the lode is 3 ft. wide, worth 30*l.* per fm.; in the stopes, in the back of this level, the lode is 4 ft. wide, worth 20*l.* per fm.; in the winze, in the bottom of this level, east of Quarry shaft, the lode is 18 in. wide, worth 20*l.* per fm.; in the 12 fm. level, west of old sump shaft, we have cut the lode on the western side of the cross-course in the past week—lode 9 in. wide, worth 7*l.* per fm; in the adit end, west of Quarry shaft, on Tolcarne tin lode, the lode is 9 in. wide, worth 5*l.* per fm.—R. JOHNS: Feb. 22.

WEST WHEAL MARIA.—The eastern engine-shaft is down about 31 fms. 2 ft., ground rather hard for sinking; the lode in this shaft is much the same as last reported, about 5 ft. wide, with spots of ore occasionally. At the western engine-shaft we have resumed sinking under the 54 fm. level, and we find the ground is much improved since we began to sink, softer and more mineralised; the north lode is now seen in the bottom of this shaft; this lode is about 2 ft. wide, composed of capel, spar, mundic, with spots of ore in places—altogether a kindly lode; in this level east the lode is 18 in. wide, with spar, and mundic. In the cross-cut south the ground is a little improved for driving.—THOMAS RODDA: Feb. 23.

WHEAL AGNES.—The lode in the adit level is 3 ft. wide, producing good stones of silver-lead ore.—B. ROBINS: Feb. 23.

WHEAL ADAMS.—The 60 fm. level, driving south, is still on the elvan course, the lode 3 ft. wide, split in bunches, with little lead, mundic, and jack in it. The 50 fm. level, driving south, on the eastern lode, is much the same as last reported, worth 5*l.* per fm.; the 50 fm. level, driving south, on the west silver-lead lode, no lode taken down since last reported; there is a very good course of lead in this end, but we are obliged to stop it up, by means of so much water coming from the lode, that it is always running against them, that they cannot keep open the level; we are now driving a side ley on a few fms.; then we intend to cut on the lode again, to heave down the water; by doing this, I think that we shall save time, and cost of a great deal of timber. The 40 fm. level, driving south, on the western silver lead lode, the lode is 5 ft. wide; we are now carrying about 3 ft. of it, which is worth about 7*l.* per fm. The 28 fm. level cross-cut is still in the elvan course; the tribute department is looking very much the same as last reported; the weather has been so favourable this last week, that we have been dressing away our lead and jack with all the speed that we can; we hope to have about 90 tons or 100 tons of jack down at the cellar by the end of this week. I heard from Mr. Beater last night; he says that he will get a vessel in two or three days time for the 5 tons, and in a week's time for the other 40 tons—that is, the No. 1 and No. 3.—THOMAS MOYLE: Feb. 23.

WHEAL ANDERTON.—The engine-shaft is completed sinking to the 60; the sumpmen are engaged casing the shaft, putting in footway, &c., immediately it is finished we shall commence cutting a plat, in which the lode will be intersected. I think, on reference to the stipulated time I calculated on to sink the shaft, &c., to the 60, is within three days, as specified on the 22d Oct. last, calculating it then to occupy four months. I have the pleasing information to communicate, that the lode, both east and west, in the 50 fm. level, is improved more than I could reasonably expect since my last report; having cut into the tin course, I find it to be 4 ft. wide, producing splendid stones of tin ore, and the lode generally good saving work. The west end in the 50, still continues very promising, leader of good work for tin, 14 in. wide, gradually increasing as we progress from the extreme east to west; the lode opened in the 50 fm. level is 70 fms. in length; the general character of the lode has every appearance of being productive of great quantities of ore; taking an average size, it is full 4 ft. wide, quite settled and collected, with very regular walls, forming an underlay from 18 in. to 21 in. in a fm. The carpenters are busily engaged putting in more stamping-mills, which shall be done with all possible speed. Every other department is going on to my entire satisfaction.—JAMES CARPENTER: Feb. 25.

WHEAL CONCORD.—The lode in the 38 west is 2½ ft. wide, presenting favourable indications I have thought it advisable to remove the men that have been driving this end, to rise in the back about 4 fms. behind the end, where the lode is 3 ft. wide, of flookan, calcareous spar, and portions of lead disseminated through it, saving work. In the 28 west the lode is 2½ ft. wide, and still producing large stones of lead, which are being saved; in the same level east, the lode is 2 ft. wide, quartz and peach, with a little carbonate of iron. The lode in the 20 west is 1 ft. wide, producing good stones of lead. Thus, you perceive, we have some lead in all our western levels; and although they are not yet rich, they seem to promise the best results at no very distant period. In the 20 south, on the cross-course, I last week apprised you we had commenced to drive west on some branches—these have come together, and proved to be the south lode, as I then anticipated; it is now a regular, well defined lode, 2 ft. wide, quartz, flookan, &c., of a kindly nature. The new lode, on which we were driving in the 20 west, from this cross course, has become very small, and the workings on it suspended; the back of the 20 is yielding some good work. The stopes, in the bottom of the 10, are very good, but the back has failed. Our pile of dressed lead is about 6 tons. The underground operations are progressing satisfactorily, and I am acting to the best of my ability for my employers' interests.—J. B. CLYMO: Feb. 25.

WHEAL ROSE CONSOLS.—Since my last we have sunk the engine-shaft 2½ fms. below the 20 fm. level—the ground has much improved in sinking, and from its appearance I consider it more congenial for lead. In driving the 20 fm. level north, on the middle lode, it has much improved in appearance in the last fathom, driving being now 3 ft. big, composed of flookan, spar, mundic, and some portions of lead; we expect in 10 or 12 fms. more driving, to intersect a caunter lode, when we hope to have a good bunch of lead. On the western lode we have driven north about 14 fms., and south about 10 fms.—the lode is composed of spar, flookan, mundic, and good stones of lead, with every appearance of making great deposits in depth. We continue to raise some fair qualities of lead from the back of the 20 fm. level. Our setting to-day has been as follows: to drive the 20 fm. level north in the middle lode at 32*s.* per fm.; the 20 fm. level on the west lode to drive north at 27*s.* per fm., and south at 30*s.* per fm. We have also set a cross-cut to drive west at a shallow level at 3*s.* 6*d.* per fathom, to intersect some other lodes which we expect to discover in this part of the mine.—J. WEBB: Feb. 12.

WHEAL ST. ANN.—Since my last report, Johnson's shaft has been sunk 7 ft., and a level driven between 7 and 8 fms. north; it is with pleasure I inform you, that we have cut two very promising lodes, about 3 ft. big, producing a quantity of mundic, peach, and pale yellow ore. Since the recommencement of this mine in Nov. last, three champion lodes and several branches, varying from 2 to 6 in., have been intersected. Samples of the lode have been assayed, varying from 2½ to 13¼ per cent.; the assay master also adding, that had it been dressed, it would have produced at least 2 per cent. more; the lodes have been cut only 6½ fms. from the surface. There are also tin lodes passing through the sett, and in the same run of country an immense quantity of tin has been raised; it would be well to remark, that the killas and granite form a junction in the centre of the sett. An engine-shaft was commenced last week, and I feel satisfied, by the present appearances, it is a most promising undertaking.—JOHN PENROSE: Feb. 22.

FOREIGN MINES.

ALTEN MINES.—*Mining Report from the 1st to 12th Jan.—Raipas.*—The prospects of this mine have undergone a material and important change since my last report. In Monk's shaft a good course of ore has been intersected, between the adit and 5 fm. levels, and the operations will, during the present month, be conducted on a profitable and rich lode, instead of dead ground, as has hitherto been the case. This shaft is now completed to the 5 fm. level, and preparations are made for continuing it to the 10. In the 5 fm. level a limestone stratum has been met with, having a contrary dip to the strata passed through above; this stratum will probably change the run of the lode, and it will be necessary to fully investigate its effects on the mineral veins before proceeding further with the shafts; for this purpose, we propose employing the shaftmen in tracing the direction of the ore, until next month, when we hope to resume the shaft, and expect to hole to the rise from the 10 fm. cross-cut about the end of February or early in March. The whim and machinery in Monk's shaft are now in full work, and fully answer the purposes for which they were intended. In the 10 fm. level cross-cut we have intersected another lode, about 2½ ft. broad, in a most congenial limestone stratum. This lode is not rich, but contains good patches of purple, yellow, and black ore, in decomposed calespash, and slate, highly impregnated with green carbonate of copper, and occasionally pieces of earthy cobalt, similar to those found in Labouchere's, in the shallow adit. It is certainly one of the most promising lodes discovered here for many years; and, from its situation and run, may probably hereafter be found a continuation of Labouchere's at this level. The whole district being composed of a complete network of mineral veins, renders it an extremely difficult matter to form any theory until the lode is further explored, which can only be done after Monk's shaft has reached this level. Labouchere's lode is still very productive, as is also Carr's, but the latter has been rather more irregular than formerly; it is not probable that the Quœnangen people can reach this place before the end of the month; and it will not be possible to commence the operations specified in my last report before their arrival.

United Mines.—The level in the stopes above the 40 has been resumed on a good branch of ore, which, however, is rather irregular, and apparently less permanent than we could desire. The stopes in the east continues good, but the tributers are not making such favourable returns as heretofore; the old stuffs are now becoming exhausted, and we must shortly look out for some more permanent employment for the people.

Ryper's has been rather fluctuating, but the prospects are not deteriorated; the new lode still makes fair returns.

Mancur's.—The adit level has been suspended for the purpose of employing the men for developing the new discovery at Michell's; one of the stopes is rather deteriorated, but all the other workings continue good.

Michell's.—The new lode is not quite so large, but equally promising and good; the four extra hands from Mancur's are now employed on exploring it in the opposite direction, towards the south-west.

Cole's.—The lode in the sink is still good, and next month we propose stoping down one of the sides, from which we expect to considerably increase our returns from this place. We have there two lodes, dipping towards each other, which, in the course of a few days, will fall together, when we fully expect an improvement. In some instances, however, the reverse has been the case; but, on the present, we have no reason to anticipate otherwise than a favourable result.—*Quœnvig.*—At present there is no remark to be made on my last report.

S. H. THOMAS.

IMPERIAL BRAZILIAN MINES.—Gold workings from 3d to 22d Dec., 8 lbs. 3 ozs. 7 dwts.; total raised from 1st July to 22d Dec., 108 lbs. 2 ozs.; from Catta Preta, from do. to do., 9 lbs. 4 ozs 10 dwts.—Total, 117 lbs. 6 oz. 10 dwts.

ST. JOHN DEL REY MINES.—*Morro Velho, Dec.* 8.—Produce for November, 12·887 oits.=123·787 lbs. gold; 3073·6 tons have been stamped, yielding 4·186 oits. per ton. Only 21·6 tons of ore have been rejected, so that the yielding may be said to show the value of the raw ores this month. The ores of the Cachoeira, mixed and stamped apart, have yielded 4·579 oits.; and since only 5·6 tons of 792·8 stamped apart were rejected, it must be considered a satisfactory yielding. The average of the heads working during the month is low, being only 67·33. There was one good half-day's stamping lost by turning off the Christnes water for fixing the launders already mentioned; besides which, there has been some tedious repairs to the stamps, which are not yet completed. Cost for November, *rs.* 25,724 426=2947*l.* 11s. 10*d.* This cost is moderate, if we could only manage to keep it there. The cost of timber still much exceeds my estimate; it is *rs.* 1429 590. This is a much more serious item of expenditure than I had anticipated, when complaining of it in the early part of this year, at that time I looked on it as temporary, but I complained without sufficient reason; for, although there is a very good stock on hand, the consumption of this material has immensely increased, far beyond anything I ever contemplated, and the quality on the whole is excellent.

NATIONAL BRAZILIAN MINES.—*Extract from the report dated Cocaes, 13th and 23d Dec.*—We have much pleasure in stating, that our mine is still in an improving state, and, notwithstanding the immense piece of good lode already discovered, we have also that east and west of the sink, from the cross-cut C C, besides the very rich pitch east of John's winze.

		Mks. oz. oit. gr.
Produce.—Cocaes, 13th Dec.—10 days		11 3 7 11
" " 23d Dec.—10 days		10 4 9 53
Total		22 0 1 64
" Cuiaba—20 days		4 2 6 32
Total for 20 days		26 3 0 24

[FROM CORRESPONDENTS.]

HARROWBARROW OLD MINE.—A letter, dated Plymouth, Feb. 24, says—"In consequence of a considerable improvement in Harrowbarrow Old Mine, a number of shares have changed hands in this neighbourhood within the last few weeks, and have been purchased by persons who held largely, and have increased their holding. The present appearance of the mine is such as to convince the inspecting agent of the propriety of commencing a new engine-house to be erected near the tin lode, in order to follow the lode considerably below the adit. Shares have been sold at 3*l.* per share, on which 6½*l.* has been paid. I think it is but justice to such persons as may desire to sell, that the present encouraging prospects should be known."

NORTH WHEAL ROBERT.—The engine-shaft, now in course of sinking, will intersect the lode in a month 20 fms. under the adit level, where expectation is confidently entertained of meeting with a good course of ore, as presenting itself 4 fms. under the adit, in a winze sunk on the lode, which is 4 ft. wide, 2 ft. good work for copper ore, worth 6 tons to every hundred whim kibbles.

WHEAL COLLIER (a continuation of North Robert lode).—An adit level, as a cross-cut, is now driving to intersect the lode under hill 30 fms.; several branches of good copper ore are being cut—it is reported, the main lode is near.

SILVER VALLEY.—Much interest being attached to the discovery at this mine, we have pleasure in giving a place to the following reports, which have been addressed by the writer to a shareholder largely interested, and resident in the country:—"*Feb.* 20.—We have made a rich discovery for silver in the 20 fm. level end west; the lode is 2½ ft. wide; I assayed a sample taken throughout, and brought it last night, which made a produce of 440 ozs. to the ton of ore. Please forgive me, by first telling you, it is a good thing; it was 10 o'clock last night when I finished assaying, and want now to go underground to send it up, and to give you full information by to-morrow's post respecting the lode, &c. Wheal Sisters' ore is about 1 ton, by my assays 226 ozs. 6 dwts. 16 grs. to the ton of ore; as this parcel, with the other two parcels at Silver Valley, is prepared for market, we should be glad to have our directions about public samplings, time of sale, &c. You have, Sir, the computed quantity of Silver Valley in three parcels, also their produce; we have not mixed the second with the first parcel, but understand you mean for us to make the best to about 150 ozs; please name it again. I hope, Sir, brighter days are dawning."——"*Feb.* 22—Our discovery on Friday in the 20 end west is very cheering; we did not do much on the lode on Saturday, as there was a pile of stuff in the end, and little air; this we have cleared out, and are now better prepared for developing the lode, and saving the silver. We have about 6 tons for washing, &c., worth, as it is, 3*l.* per ton, and about 15*l.* more taken up on Saturday. The lode in the end is 2½ ft. wide; on hanging wall is a course of flookan, intermixed with killas, 10 in. wide; on footwall a course 9 in. wide, a compound of white iron, mundic, and flookan; the silver course, in the middle of these two branches, is 10 in. wide towards the bottom, and 16 in. wide in the back; it is composed of peach, black mundic, quartz, white iron, and silver-lead, all in a friable state. I assayed a sample on Saturday night, taken right across the lode up and down, which produced 200 ozs. to the ton. I think I am on the safe side, in calling it worth 150*l.* per fm., and hope will be of a long duration. We shall one of us be in the end in working time; this attention, with a door in the level, we consider will protect your property; but, if you think, Sir, we ought to do anything in addition, we should most cheerfully attend to your directions. I hope to have your further instructions soon about the parcels prepared for sale, and intend to write, or give my views, what I have had this some time, for the further operations on the silver lode, which I think you will acquiesce in, and what I really believe will be advantageous to the company. I shall send on the tin sample to-morrow.—PETER EDDY."

WHEAL BEAM MINING COMPANY—IMPORTANT CASE.

STANNARIES COURT, CORNWALL.—FEB. 16.

RICKETTS AND OTHERS *v.* SAMUEL MOYLE.—This was a creditors' petition by the plaintiffs, who were bankers, against the purser and adventurers in the Wheal Beam Mine. The debt, for money lent to the mine, was alleged to be 1146*l.*, and to liquidate this claim, Mr. Simmons, on the part of the plaintiffs, obtained at the present sittings a rule absolute for sale of the mine. Mr. STOKES, however, now appeared in behalf of W. Medland, of the parish of St. Austell, who he stated, was an adventurer in the mine, but had not yet been before the court, and until the present time was unacquainted with the proceedings in the case. He then read an affidavit by W. Medland, in support of the allegations in his petition. Deponent stated that he had been an adventurer in the mine for about 10 years, and was at the present time. That at the time stated in the petition to have been the period during which the debt was contracted, from the 1st of March, 1844, to the 23rd of April last, he had been informed, and verily believed, that Edmund Turner, one of the plaintiffs, was an adventurer, and that he continued so until about the 6th August. Plaintiffs' petition stated S. Moyle to be purser, but deponent says he ceased to be purser in May last, and the petition was not filed until September. The petition alleged that S. Moyle is the manager; but deponent states that he never was, but that S. Robins, of the parish of Roche, has been for several years past, and still is the manager of the mine. Deponent further states, that the said S. Moyle, after ceasing to be purser, retained the cost-book, and other books and documents belonging to the mine, and had ever since kept possession of them, although their delivery had been repeatedly requested by those to whom the management had been entrusted since he ceased to be purser. That H. S. Stokes, on behalf of deponent, had required S. Moyle to deliver up the cost book and documents, but that he had neglected up to this time to deliver up the same. Deponent further stated, that he had, on demand, paid up his full costs for the purposes of the mine, and that he was ignorant and could not state whether, between the 1st of March, 1844, and the 23rd of April last, the said F. Ricketts, H. J. Enthoven, E. Turner, J. O. Mason, and T. James, advanced and lent divers large sums of money for the purposes of the mine, but he verily believed that such advances were not necessary for working and carrying on the mine. That prior to three years ago, the said S. Moyle was authorised by some, but deponent believed, not by the majority of the shareholders, nor by persons representing the majority, to open an account with the bankers, and to overdraw the account to the amount of 1000*l.* He could not state whether such authority was set forth at the time in the book of the mining company; but he believed that such mining account was not. The plaintiffs' petition alleged that the account was well known to, and sanctioned by, the shareholders; but deponent believed that it was known to, and sanctioned by, only a few. He had been informed, and believed that it was not resolved at a public meeting of the adventurers, on the 19th of Oct., 1844, at Chacewater, that the purser should collect all costs in arrear, and appropriate them towards the debts due to the bankers and the claims on the mine. Deponent says he believes no such public meeting then took place. He has been informed that a public meeting of the adventurers was held on the 13th of October, 1844, at the Red Lion Hotel, Truro; but he cannot say, whether then or not it was unanimously resolved by the shareholders (as the petition states), that the banking account should be increased from 1400*l.* to 1800*l.* He had been informed that such resolution was inserted in the cost-book, and that the only shareholder who subscribed to it was the said E. Turner. The plaintiffs' petition states, that on the 4th of March, 1846, at a special meeting of the adventurers at the Queen's Head, St. Austell, it was resolved that the costs to the end of Sept. last, with the back costs, be collected and paid into the Truro Bank, in liquidation of the banking debt due to them and other creditors. Deponent says he was at that meeting, but does not recollect whether such resolution was passed. He had been informed that the moneys had not been advanced and lent with the privity of the shareholders; but that several of the shareholders were ignorant of the advances then made. He believed that the said F. Ricketts, Enthoven, and Co., and S. Moyle were acting in confederacy and collusion, for the purpose of substantiating the claim of the said F. Ricketts, Enthoven, Turner, Mason, and James; and if the said F. Ricketts and Co., were required to prove the several allegations in their petition, he believed they would be unable to make out the sum, and that the shareholders would not be found to be indebted to them 1146*l.*, as therein alleged.—Some conversation took place on this affidavit, in the course of which, Mr. SIMMONS urged, that if a rule were granted, it should be argued as early as possible, for otherwise the current expenses of the mine might swallow up the money to be derived by the creditors from sale of the machinery.—Mr. STOKES said there could be no fear of this, as the mine was now one of the most flourishing tin mines in the county.—The VICE-WARDEN eventually granted a rule *nisi* as to deponent being made an adventurer with S. Moyle, and being allowed to open the petition and resist the debt; and also to show cause why he should not be allowed to inspect the books. In the mean time, whatever be the result of that inspection, the registrar would not proceed to sale. Cause to be shown against the rule *nisi* in London, on the 3rd of March.

It is the intention of the Earl of Burlington to have small steam-engines at his slate-works, at Kirkby Ireleth, to convey the "clogs" down the levels to the place where they are manufactured into slate, and, also for removing the rubbish out of the quarries. An inclined plane has been constructed by Messrs. Tredwell and Co., for the purpose of conveying the slate down from the above works to the Kirkby station on the Furness Railway.—*Whitehaven Herald.*

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY ....Norfolk Estuary Company—British Hotel, Cockspur-street, at Two.
Furness Railway—offices, at Eleven.
West Cornwall Railway—offices, at One.
Irish Waste Land Improvement Society—King's Head, Poultry, Twelve.
Great Northern Railway—Hall of Commerce, at Twelve.
Caledonian Railway—Gibb's Royal Hotel, Edinburgh, at One.
London and Manchester Railway (Remington's)—London Tavern, Twelve
MONDAY.....Kent Water-Works Company—George and Vulture Tavern, at Twelve.
TUESDAY.....General Reversionary and Investment Company—offices, at One.
Thames Tunnel Company—Radley's Hotel, Blackfriars, at One.
WEDNESDAY...London and Westminster Bank—offices, at One.
Great North of India Railway—offices, at Twelve.
Wheal Acland Mining Company—Pearce's Royal Hotel, Truro
THURSDAY.....Bristol and Exeter Railway—White Lion Hotel, Bristol, at Twelve.
Clerical, Medical, and General Life Assurance Company—offices, 1-p. One.
Chelsea Water-Works Company—office, at One.
European Gas Company—office, at One.

BANWEN IRON COMPANY.

The first general meeting of this company was held at the offices, Threadneedle-street, on Monday, the 22d inst.,—S. B. BARNETT, Esq., in the chair,—when the directors' report, together with the reports from the agents at the mine, which seemed to give general satisfaction, were submitted, received, and adopted. Some rich specimens from the mine, recently received, were exhibited, and proved very satisfactory. Thanks having been unanimously passed to the chairman and directors, the meeting separated.

LLYNVI IRON COMPANY.

A meeting of this company was held at the offices, on Wednesday, the 24th inst.,—Dr. BOWRING, M.P., in the chair,—at which a dividend, at the rate of 8 per cent. per annum, free of income tax, was declared, leaving a considerable sum to be carried over to the "rest" of undivided profits. An additional capital of 60,000*l.* added to the stock of this prosperous company, was announced to have been all subscribed.—The bill for the proposed incorporation of the company, now before Parliament, was laid on the table, and approved by the shareholders.—Great satisfaction was expressed at the position and prospects of the company, and thanks voted to the board, for the able management of its concerns.

CORNWALL RAILWAY COMPANY.

The first half-yearly general meeting of shareholders was held at the Assembly Room, Truro, on Tuesday last—J. T. TREFFRY, Esq. (chairman of the directors), presiding.

The CHAIRMAN having briefly noticed the subjects of the directors' report, stated that the accounts, up to the 31st December last, exhibited a balance in favour of the company of 56,919*l.* 16s. 10d. The whole amount of liabilities undischarged on the 31st of December last, will not exceed 11,000*l.* The bill for the deviation on the other side of the Tamar, and for the amendment of the Cornwall Railway Act, has passed Standing Orders without opposition, and read a first time. A clause has been introduced into it, authorising the payment of interest upon all moneys which have been, or may be hereafter, paid up in respect of shares, at the rate of 5 per cent. instead of 4 per cent. An offer has been made by an eminent contractor, to construct the whole line, including the Saltash-bridge, on terms which Mr. Brunel considers decidedly advantageous, and which will ensure the early completion of the works. The directors, in contemplation of the early commencement of the works, have deemed it necessary to make a call of 2*l.* 10s. per 50*l.* share, and 1*l.* 5s. on each 25*l.* share, payable on the 1st of March next. He (the chairman) said he regretted the unnatural expense to which the company had been put by the opposition it had met with. He could not say, until their next meeting, at what probable period their work would be completed. Mr. Brunel had reported their gradients to be improving, having himself gone over the road. The report was then adopted.

After the general, a special meeting was held, at which the amended bill, which provides for the increased payment of 5 per cent. interest on all calls paid by the shareholders, and for the deviation between Saltash and Plymouth, so as to accommodate Devonport, was considered.

The report of the directors, and the prospects of the company, gave great satisfaction to all present.

IMPERIAL BRAZILIAN MINING ASSOCIATION.

A special general meeting of the above company was held at the London Tavern, Bishopsgate-street, on Thursday, the 25th inst.,

JOSHUA WALKER, Esq., in the chair.

The CHAIRMAN, in directing the attention of the proprietors to the object for which they had been called, observed, that the point was that of raising an additional capital to work the mines, referred to in the report which had been submitted to them, and of which the directors formed a high estimate. It would be for the shareholders to determine whether they would take to the property, or not?—The following report was then read:—

REPORT.

In the reports presented to the shareholders by the directors at the two last half-yearly meetings, on the 12th May and 13th Nov., 1846, an unreserved statement was submitted of the condition and prospect of the mine of Gongo Soco. They also communicated to the shareholders their determination to endeavour to procure by purchase or lease some new property, on which the force belonging to this association in Brazil might be profitably employed; and they laid before the proprietors the reason which had induced them to come that decision. A reference to the above reports, which were unanimously received and adopted by the respective meetings, will bring these circumstances to the recollection of every shareholder. For nearly two years the chief commissioner has had his attention fixed on this most important affair. Under every circumstance, the task of obtaining an eligible mining property in Brazil on fair terms would be difficult; but more especially so to this association, which is the possessor of such a mine as that of Gongo Soco, which, though now unprofitable, had for many years yielded ample returns. The directors wishing to exercise the greatest caution, and to have the best possible opinions and advice before they committed the association to a new acquisition, and also feeling that it was due to their present excellent chief commissioner, Mr. W. J. Henwood, not to impose on him and the mining captains of the association the entire responsibility of this weighty matter, selected a person of well known skill and experience, and who had for many years been engaged in gold mining in Brazil, to assist and co-operate in the examination of the various mining properties, which could be obtained in the province of Minas Geraes.

After the careful survey and investigation of various estates, Mr. Henwood, the mining officers of this association, and the gentleman above alluded to, cordially agreed in selecting the mines of Bananal and Agoa Quente (which are of a formation somewhat resembling that of Gongo Soco), and the adjoining estates of Duraco, Fazendao, Valeria, &c., as properties presenting the best chances of profitable employment of the capital and force of the Imperial Brazilian Mining Association. A considerable time more than was anticipated has been consumed in making and completing the arrangement for these properties; but despatches from the chief commissioner, dated 23d Nov. and 12th Dec. last, announce that the bargain had been concluded; that the title deeds for approval were in the hands of the legal adviser of the association; that a few weeks only would be required to examine the deeds, to set out the boundaries of the properties by the officers of the province, and to make the conveyance; and that by the end of last year, or soon after, he expected that the force, or such part as was requisite, would be removed from Gongo to the new mines, to commence immediate and active operations. The price agreed on for a 50 years' lease of the mines of Bananal and Agoa Quente is 20,000*l.*, and of the estate of Duraco, &c., 5000*l.*, besides an annual rent of 100 milreis, including all the buildings, machinery, implements, waters, land, pastures, woods, and every appurtenance on the several properties.

The mode of payment is by drafts on the association in London, and the directors almost daily expect the presentation of the bills for acceptance. The directors wish here shortly to state that they enter upon this new mine with the most decided intention of carrying out their plan for improving the condition of the negroes, hoping to be able to render them fit for becoming steady, sober, and industrious free labourers.

The directors, from past experience, believe that the system of negro labour, besides being objectionable, is not on the whole really economical; and they would have hesitated to embark in this new mining acquisition, had they entertained much doubt of being able successfully to carry out their plan of freedom to the black, and the beneficial substitution, by degrees, of English in lieu of negro labour.

Although the directors entertain no doubt that the association was at the commencement of the year in possession of the new mines, and that the drafts on the chairman for the agreed consideration for the lease are consequently near at hand, still the directors, until they are advised of the fact, consider it would be premature to communicate at present the reports of their chief commissioner and the mining officers, who inspected and selected these properties; and they feel convinced that the proprietors will concur in this view. Immediately, however, that the directors hear that the estates have been completely and legally conveyed to the association, they will, with much pleasure, print and circulate these reports, now in their possession, amongst the shareholders. The directors indulge the confident hope that this new property will bring back those times, when they had the pleasing task half yearly of declaring dividends upon the capital invested. Specimens from these mines are at the office, and may be seen by the proprietors at any time.

The stores at Gongo contain an abundant supply of all the necessary material, which will be applied under the able direction of Mr. Henwood and the captains, who have become familiarly acquainted by long experience with the best method of mining in formations similar to that of Gongo Soco. Before the half-yearly meeting of shareholders in May next, further advices will enable the directors, in all probability, to give some detail of intended operations, and of the progress made, and the shareholders may be assured that no delay, beyond what sound judgment and prudence may dictate, will interfere to prevent their realisation of their hopes and expectations. In addition to the sum of 56,000*l.* already named, there will be the cost of the preliminary mining operations, the preparation of adequate machinery and buildings, before the mine can be said to be fairly in work, which, although not at present possible to ascertain, will probably not amount to a large sum. The directors fully expect that 3*l.* per share will be the outside demand that will be made on the shareholders. If the directors see their way prudently, to complete the entire arrangements for a less sum, they will be most happy to do so; but they consider it would not be good policy to apply any large portion of profit realised from the mine to the purchase, or preliminary operations and outlay, and thereby delay the payment of dividends, to which purpose alone the profits should, in the opinion of the board, be apportioned. In conclusion, the directors have now to announce that they have made a call of 2*l.* per share, in conformity with the Deed of Settlement; the same to be payable by the respective proprietors, on or before the 29th of March next. The directors, at the same time, wish it to be understood, that should this purchase not be completed, it is their intention to submit a proposition to the shareholders at a future general meeting to return the amount.

A general discussion ensued: Mr. MOSES MOCATTA taking a leading part, who raised the question as to the amount of reserve fund, which, it appeared, did not amount at present to more than 25,000*l.*

A vote of thanks having been passed to the chairman and directors, the meeting adjourned.

BEDFORD UNITED MINING COMPANY.

The annual meeting was held at the offices of the company, 51, Old Broad-street, on Thursday, the 25th instant.

WILLIAM A. THOMAS, Esq., in the chair.

The advertisement convening the meeting was read, as well as the report of the directors, when a statement of the accounts was presented, of which the following is an abstract:—

Statement of Accounts.

Feb., 1846—Balance last meeting		£1031	5 11
Ores sold from Jan. to Dec. (inclusive), 1165 tons	£6923 11 6		
Dues	433 6 0		
		6449	5 8
Tin sold	£ 444 13 3		
Less dues	29 8 10	415	4 5
Total		£7935	16 0
1846—Costs from January to December (inclusive)		£6944	0 10
Miscellaneous expenses (in account)		291	9 3
Balance in hand		700	5 11
Total		7935	16 0

A lengthy and highly satisfactory report of the state and prospects of the mine, by J. H. Hichens, Esq., and Capt. Phillips, was read.—The reports and accounts having been adopted, the CHAIRMAN stated, that two of the directors would retire, but were eligible for re-election; the two gentlemen were proposed, and re-appointed, as well as the former auditor.—A vote of thanks having been passed to the chairman, the meeting separated.

CARADON UNITED MINING COMPANY.

A general meeting of adventurers was held at the offices of Messrs. Watson and Cuell, St. Michael's-alley, Cornhill, on Thursday, the 25th inst.

GEORGE MACKAY, Esq., in the chair.

The CHAIRMAN, having read the notice convening the meeting, briefly referred to the satisfactory report of the captain, and the general prospects of the mine; and, after commenting on some letters which had been received, suggested the examination of the accounts (an abstract of which is appended), proposed that the same be received and passed: this being done, it was proposed and carried, that a call of 2*l.* per 256th share be made, to carry on the operations of the mine.

The statement of accounts showed—Balance at banker's, October 5th, 138*l.* 3s. 8d.; calls received, 536*l.*=674*l.* 3s. 8d. Cash paid, Sept. cost, 116*l.* 14s. 3d.; Oct., 126*l.* 4s. 7d.; Nov., 110*l.* 16s. 10d.; Dec., 97*l.* 17s. 4d.; Jan., 72*l.* 12s. 1d.; bill paid, Nov. 17th, 25*l.* 4s.=549*l.* 9s. 1d. Balance in hand, 124*l.* 14s. 7d.

The following report, from Capt. W Penrose, was read to the meeting:—

Caradon United Mines, Feb. 22.—To get clear of the run, we had to drive nearly due west about 6 fms., where we intersected a great number of branches, altogether nearly 4 fms. wide; those branches are from 4 in. to 18 in. wide, composed of gossan, soft spar, prian, flookan, with portions of black copper ore, and the oxide of copper, and have reason to believe they will prove productive in depth, their underlay is about 18 in. in a fathom, their course is about 35° to the south of east, and consider it to be a large caunter lode, and if they continue in the present direction they will cross all the other lodes in the torr, some of which are very promising; from these branches we have driven about 3 fms. south, where we have cut two east and west branches—the first is about 2 in. wide, with portions of tin; the last is from 4 in. to 6 in. wide, and worth from 7s. to 8s. per barrow, and believe they will make copper in depth, as they contain good portions of gossan; the underlay of this last is about 9 in. in a fathom, and will very shortly fall together in depth, and will not go out of the sett for more than 200 fms. in depth; if they continue as they now are, and should the lode underlay the same, we shall cut it in about 10 ft. further south, which will take about a fortnight more from this time; this is the distance they are apart from each other to the surface, and should the lode improve to this depth (as I have reason to expect it will), we shall very soon have a good mine; the channel of ground we are now in is very congenial for mineral, frequently meeting with greens in the granite, which is very kindly.—W. PENROSE.

A vote of thanks having been given to Messrs. Watson and Cuell, for their efficient and gratuitous services in keeping the accounts, as well as to the chairman for his urbanity on the present occasion, the meeting separated.

LANIVET CONSOLS MINING COMPANY.

The general four-monthly meeting of shareholders was held on Wednesday, the 24th inst., at the mining offices, George-yard, Lombard-street, when the report of the directors, the agent's report (as annexed), with the accounts for the four months ending December, were submitted, and approved of. The costs for the four months were 2382*l.* 9s. 6d.; and the sales of ore for the same period, 1871*l.* 19s. 9d.—showing a loss of 510*l.* 9s. 9d. It appeared, however, that the returns for Dec. exceeded the cost for that month, and the prospects of the mine were represented as more promising than for a considerable period. The balance against the company, when all the calls are paid, amounts to 691*l.* 5s. 9d.—A resolution was entered into to enforce the payment of the arrears, and a further call made of 5s. per share.—The following report, from Capt. H. Williams, was read to the meeting:—

Lanivet Consols, Feb. 24.—Since the meeting in October, 1846, our futwork operations have been confined chiefly in driving the 80, 40, 30, and 20 fm. levels, and sinking winzes for ventilation. Our operations in the 80, west of Elizabeth shaft, have been in general poor, although not without some bunches of good yellow ore; the leader part of the lode on which we are at present driving, is 2 ft. wide, producing some good stones of ore—this is on the north part of the lode; we expect favourable results from this end, having had a kindly lode for many fms. In the 60 fm. level, farther west, we shall be able to ventilate by winzes, and afterwards, as the end advances, sink Baker's shaft, which is the next shaft west of Elizabeth; very little has been done west of the last-named shaft below the 40. In the 80 east, we have had good ore ground throughout the greater part of our operations; have driven through a good bunch of ore, 3½ ft. wide, worth from 4 to 5 tons of good ore per fm.; the leader part is at present split, and not so good as it has been, and the ground more hard; we are driving at present on the north part, which is 2 ft. wide, producing some saving work, but not rich; the ore in this level has held on many fms. further east than in the level above; two pitches are working in the back of this level, one at 10s., and the other at 4s., in the 1*l.* There is a good bunch of ore gone down in the bottom of this level for many fms. in length; it is intended to sink under the level on the lode, after we have finished our diagonal shaft from 60 to this level; we have just made a beginning to sink it, this will go down very fast, the greater part of the ground having been worked away on tribute; we shall also be able to put much of the stile in pitches not filled up; by sinking in this direction we shall be able to prove the lode below the 80 much quicker than by sinking the perpendicular, which is very hard, and the lode underlaying 3 ft. in 1 fm. (or the hypothenuse giving 3 ft. base to 1 fm. perpendicular.) From the shaft the cross-cut in the 90 would be 15 fms., and in the 100 it would be 20 fms. We have every reason to expect hard ground, or ironstone, to the north of the lode, having had to encounter it several places in Tretoll—this shaft is nearly 200 fms. east of the engine, the rods are iron, which are not sufficiently strong, by which means breakages frequently occurs, much to the disadvantage of the mine. I recommend 8-inch wood rods in their stead, which would cost about 150*l.*, besides what the present iron rods would fetch, which, of course, would be sold; I have consulted the engineer, who has thought it the most advisable way to pursue. We have suspended, for the present, the 40 fm. level east—that level having been unproductive for several months. We have holed a winze, sinking under the 30 fm. level east, on the eastern part of the pitch raised on tribute from back of the 40, which could not be worked for want of air; we have had a good lode of hard yellow ore in the capel throughout the whole of the operations—this has been reported regularly. We have driven the 30, east of this winze, about 3 fms., through a good grey lode, from 2 to 3 ft. wide; there is no level over this point of extension—consequently, much ore may be expected from here. We have lately resumed the 20 fm. level, west of Elizabeth shaft, on the north part of the lode; there is room enough in the pitch below to hold the stile coming from this end for a considerable time, the leader part of the lode is irregular in size, frequently from 2 ft. to 6 in., but occasionally producing some rich bunches of black and grey ore; the tributers have worked away the backs, or ground, 15 fms. above this level, but a small distance from this end, and are still working at 5s. 6d. in the 1*l.* According to the assays, which we had from our last samples, our last month's ore will be about the same as the preceding month.—H. WILLIAMS.

KIRKCUDBRIGHTSHIRE.—The monthly meeting of shareholders was held, at the offices of the company, Birchin-lane, on Tuesday, the 16th inst.—W. ABBOTT, Jun., Esq., in the chair.—The minutes of the last meeting having been read and confirmed, the SECRETARY read a correspondence from Capt. Buzzo, explaining the heavy cost-sheets as arising from expenses attending the completion of the necessary plant, erection of count-house, &c., and showing that the actual working cost does not amount to more than 250*l.* per month. By the end of this month, it was stated at least 30 tons of ore would be ready for sale: nevertheless, it was resolved that a call of 10s. per share should be made. The several reports of the operations at Cairnsmore Mine, will be found regularly inserted among our Mining Correspondence.—The statement of accounts showed—balance in favour of mine on 12th Jan., 650*l.* 16s. 8d.; copper ore sold Jan. 16, to Messrs. Newton, Keates, and Co., 9*l.* 12s. 10d.=660*l.* 9s. 6d. Cost to Jan., 1847, 425*l.* 3s. 4d.—leaving balance in favour of mine, 235*l.* 6s. 2d. The following is an account of the assets and liabilities:—Cash in hand, 322*l.* 4s. 10d.: calls unpaid April, 1846, 10s.; June, 10s.; August, 3*l.*; Oct., 33*l.*; Dec., 316*l.*=353*l.*: making a total of 675*l.* 4s. 10d.—Unpaid: J. Murray, 14*l.* 15s. 4d.; Jan. cost, 425*l.* 3s. 4d.—Leaving present balance, 235*l.* 6s. 2d.

CONSOLIDATED TRETOIL MINING COMPANY.—A meeting was called for Friday, the 26th inst., at the offices, George-yard, but the parties present holding only 700 shares, while the company is composed of 4000 shares, it was determined that an adjournment should take place until Wednesday next.

CALLESTOCK.—A meeting of adventurers was held, at the mine, on the 16th inst., when the accounts were presented, showing—Cost for Aug., 128*l.* 16s. 5½d.; Sept., 66*l.* 3s. 3½d.; Oct., 140*l.* 0s. 2½d.; Nov., 71*l.* 3s. 5d.; Dec., 363*l.* 19s. 2d.; Jan., 111*l.* 7s.; balance due to the purser last account, 41*l.* 17s. 6d.—923*l.* 7s. 0½d.—By call of 5*l.* per share, made Aug. 21, 640*l.*: leaving balance due purser, 283*l.* 7s. 0½d.—The charges, having been examined, were allowed; and a call of 4*l.* per share made to pay balance, and for the further prosecuting the mine. It was also resolved—That all materials required for joint operations, and to be paid for between the two mines, shall be ordered and allotted with the sanction of the agents of each mine; and that an order book and receiving book be kept on the mine, with the copy of the goods ordered, and the agents name affixed.—That it is expedient to obtain the leases from the several lords as promptly as possible; and that a special committee be appointed to take such steps for that purpose as they may deem most desirable for the interest of the adventurers; and that Messrs. Knight, Vice, Hodge, E. Michell, and I. T. Tregellas, be members of such committee.—We will publish the agents' report in our next week's Journal.

WHEAL MARGARET.—A meeting of shareholders was held at Halestown, on Monday last, when the accounts to the end of December last were presented, showing—By tin sold, 4468*l.* 18s. 4d.; balance of last account, 380*l.* 1s. 1d.=4848*l.* 14s. 5d.—Labour cost, 1849*l.* 15s. 1d.; coals, 63*l.* 8s. 4d.; merchants' bills, 795*l.* 10s. 8d.; balance, 2140*l.* 0s. 4d.—By dividend, 15*l.* per share, now declared, 1680*l.*: leaving balance in favour of adventurers, 460*l.* 0s. 4d.

A deputation from the "Lancashire Coal Proprietors' Association"—consisting of Messrs. Fletcher, Darlington, Ogden, and Watkins—are in London, watching the proceedings in the House of Commons as regards the bill "for regulating the proceedings of the Commissioners of Railways, and for amending the law relating to railways." The bill is ordered to be read a second time on Monday next, and we shall not fail to notice its progress.

A deputation from the Shrewsbury and Birmingham Railway Company, consisting of Messrs. Badger, Knox, and W. Roy, had an interview with the Right Hon. Edward Strutt yesterday at the office of the Commissioners of Railways, in Great George-street.

EASTERN RAILWAY COMPANY.—In the case of Scoones v. this company, heard yesterday, in the Secondaries' Court, to assess the damages to the plaintiff, for injuries sustained by an accident which occurred on the Eastern Counties, on the 18th July last, the jury gave a verdict for 750*l.*; the damages were laid at 2000*l.* In consequence of the accident, the plaintiff had lost all his customers, not being able to attend to business, and had been obliged to give up his shop.

THE GREAT BELL FOR MONTREAL.—The casting of this, the largest bell ever yet made in the country, was successfully completed on Saturday last, at the foundry of Messrs. Mears, in Whitechapel. The quantity of metal fused was about 25 tons. The founders, it is stated, intend to give the public an opportunity of inspecting the work when perfectly finished, previous to its shipment for Canada.

Mining.

Our usual arrangement of matter is somewhat interfered with in this week's Journal; we, therefore, have to direct attention to the letters on Mining subjects, inserted on the 9th page: also, to some interesting details on Mining in Australia, in the 16th page. We have given the very long letters on the Copper Trade insertion, in order that, when the attention of the Legislature may be called thereto, all the information on the subject can be referred to in our volumes.

NEW PATENTS.

W. Bayliss, Bilston, Stafford, chain maker, for a machine for flattening and turning iron links for flat wood slab chains.

Alphonse le Mire de Normandy, Bethnal-green, Middlesex, for improvements in the manufacture of zinc.

F. Walton, Wolverhampton, for an improved mode of coating or covering metals; which improvement may be substituted to japanning, tinning, &c.

J. Lowe, Manchester, civil engineer, and J. Simpson, of the same place, joiner, for certain improvements applicable to carriages to be used upon railways, part of which improvements may also be used upon other roads.

C. H. Wild, Mortimer-street, Cavendish-square, Middlesex, for improvements in constructing parts of railways.

C. Fox, London Works, Birmingham, for a method or methods of welding or uniting pieces of metal together, and of preserving or forming pieces of metal into forms or shapes.

COAL MARKET, LONDON.

MONDAY.—Carr's Hartley 16 6—Chester Main 16 9 to 17—Davison's West Hartley 16 6—Hasting's Hartley 16 6—Holywell Main 16 6—North Pontop 15 3—Original Tanfield 15 6—Pontop Windsor 16—West Wylam 18—Wall's End Bewicke and Co. 19 6—Heaton 19 3—Hebburn 18—Hilda 18—Hotspur 16—Walker 18—Eden Main 20—Belmont 20—Braddyll's Hetton 21 9—Bell 20 9—Haswell 21 9—Lamiston 21 3—Shotton 20 9—Stewart's 21 6—Hudson's Hartlepool 20—High Thornley 19—Kelloe 21 6—Adelaide 21—Cowndon Tees 19 6—Seymour Tees 20—Tees 21 6—West Cornforth 19—Cowpen Hartley 16 6—Derwentwater Hartley 16 6—Ships, 134.

WEDNESDAY.—Buddle's West Hartley 16 6—Carr's Hartley 16 6—Chester Main 16 9—Dean's Primrose 16 3—Dipton Tanfield 15—Ellison Low Main 15—Grace's Hartley 15 6—Hasting's Hartley 16 6—Holywell Main 17 6—New Tanfield 15 6—North Pontop 15—Original Tanfield 15—Ord's Redheugh 15—Pontop Windsor 15 6—Ravensworth's West Hartley 16 6—Townley 16—Tanfield Moor 19 6—West Hartley 16 6—Wylam 18—Eden Main 18 9—Cowpen Hartley 16 6—Derwentwater Hartley 16 6—Fordel Main 15 6—Howard's West Hartley Netherton 16 6—Sidney's Hartley 16 6—Wall's End Brown's Gas 15 5—Burnhope 17 3—Clarke and Co. 16 9—Dennison 18—Gosforth 17 6—Harton 17 6—Hetburn 16 6—Hilda 17—Hotspur 16 6—Killingworth 17 9—Riddell's 17—Wellington 17—Walker 17 6—Belmont 19—Braddyll's Hetton 21—Bell 20—Haswell 21—Hetton 20 6—Lambton 20 3—Russell's Hetton 20—Stewart's 20, 20 3, to 20 6—Hudson's Hartlepool 19—High Thornley 18 6—Heugh Hall 18 9—Hartley Steam 15 6—Burrell 18 6—South Durham 18 6—Tees 20 6—West Hetton 18 6.—Ships, 261; sold, 90.

FRIDAY.—Adair's Main 15—Buddle's West Hartley 16 6—Carr's Hartley 16 6—Dean's Primrose 15 6—Dipton Tanfield 14 6—Grace's Hartley 15—Hasting's Hartley 16 6—New Tanfield 15—North Pontop 14 6—Original Tanfield 14 6—Ord's Redheugh 15—Pontop Windsor 15 3—Ravensworth's West Hartley 16 6—Ravensworth's Pelaw 14 6—Townley 16—Tanfield Moor 18 6—West Hartley 16 6—Wall's-End Bewicke and Co. 17 9—Brown's Gas 15—Barnard 16—Clarke and Co. 16 6—Denison 17—Heaton 17—Hilda 16 6—Hotspur 16 3—Killingworth 17 3—Walker 16 9 to 17—Eden Main 18 9—Hetton 20—Keepier 18 9—Lambton 19 9—Stewart's 20—Thompson and North Durham 15—Kelloe 19 9 to 20—Cowndon Hartley 15 3—Adelaide Tees 20—South Durham 18 6—Tees 20 6—West Cornforth 18—Cowpen Hartley 16 6—Derwentwater Hartley 16 6—Howard's West Hartley Netherton 16 6—Robin Hood 16—Sidney's Hartley 16 6—Ships at market, 187.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 130,593*l.*, thus accounted for:—56,899*l.* for the conveyance of passengers only, 37,276*l.* for the carriage of goods, and a remainder of 26,416*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 13,233*l.*, when the mileage was about 1,920.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£142,900	3 p.c.	£ 261 18 10	£ 163
Chester and Birkenhead	15	658,293	2½	433 3 8	506
Dublin and Drogheda	33	669,248	3½	653 15 10	630
Dublin and Kingstown	6	349,736	9	547 0 0	681
Dundee and Arbroath	16½	156,323	6	286 17 6	253
East Lancashire	28	814,417	—	642 0 0	—
Eastern Counties	184½	6,513,026	7	8016 5 6	6377
Eastern Union	17	227,253	—	425 0 0	—
Edinburgh and Glasgow	46	2,119,136	6	3112 16 8	2747
Glasgow, Paisley, and Ayr	53	1,301,381	7	1933 9 3	1850
Glasgow, Paisley, & Greenock	23	829,427	2	875 12 0	764
Great Southern and Western	56½	1,343,718	—	1066 12 11	—
Great Western	241	8,585,605	6	14145 12 8	14978
Ipswich and Bury	26½	303,768	—	358 0 0	—
London and North Western	378½	16,042,004	10	32234 13 0	32265
London and Blackwall	4	1,081,273	1½	—	696
London, Brighton, & South Coast	112	3,399,280	5	4500 15 4	34583
London and South-Western	127	2,468,544	9	4955 3 11½	4996
Manchester & Leeds	117	3,770,750	7	7030 10 1	5347
Manchester, Sheffield, & Lincolnsh.	49½	1,639,221	5	1686 13 7	1496
Midland Company	329½	7,862,274	7	15477 9 6	14891
Newcastle and Berwick	9	1,184,079	5	491 6 7	—
Newcastle and Carlisle	65	1,184,880	5	1883 4 7	1161
Norfolk	70½	985,079	6	1356 8 4	1170
North British	72½	1,459,950	—	1149 1 6	—
Preston and Wyre	30	422,014	9½	539 10 6	576
Shrewsbury and Chester	18	354,945	—	312 13 6	—
South Devon	20	778,976	5	360 1 10	—
South-Eastern	140	5,260,816	3½	5299 8 0	5278
Taff Vale	30½	690,229	6½	1438 8 11	1103
Ulster	25	356,353	5½	—	—
York and Newcastle	183½	1,712,317	9	6637 9 2	6111
York and North Midland	162½	2,483,256	10	4098 11 4	4627
FOREIGN RAILWAYS.					
Dutch Rhenish	57	—	—	5235 0 0*	—
Northern of France	260	—	4	8289 0 0	—
Orleans and Bordeaux	72	599,040	4	2298 8 0	—
Paris and Orleans	82	2,062,916	9½	5145 0 0	5370
Paris and Rouen	85	2,082,916	8½	5610 0 0	5645
Paris and Versailles (left bank)	—	—	—	1825 0 0*	—
Ditto (right bank)	—	—	—	5747 0 0*	—

* Last monthly return.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 203 4 ½	Belgian Bonds, 4½ per Cent., 96
3 per Cent. Reduced Ann., 90½ ¾	Dutch, 2½ per Cent., 56⅝ ¼ ⅛
3 per Cent. Consols Ann., 90 ¼	Brazilian, 5 per Cents., 87½
3 per Cent. Annuities, 89½	Chilian, 3 per Cents., 53½
3½ per Cent. Ann., 92½ ⅝ ⅜	Mexican, 5 per Cents., 22½
Long Annuities, 9¾	Spanish, 5 per Cents., 24½ ⅜
India Stock, 10½ per Cent., 249½	Ditto 3 per Cents., 35
3 per Cent. Consols for Acc., 90⅝ ⅜ ½	Portuguese, 4 per Cents., 33½ 4½
Exchequer Bills, 1000*l.* 1½*d.*, 7 5 pm.	Russian, 5 per Cents., —

Mines.—There has been a little more animation in the Mining Share Market during the week, with a pleasing prospect of its continuance There appeared to have been a little hesitation to transact business generally, until the Ministerial measures became known, which were no sooner explained than confidence became manifest—fears of the timid, and doubts of the cautious, have given way to the opinion that the financial affairs of the speculating community will improve as the season advances.

During the week several transactions have taken place in North Roskear, North Pool, and the Callington Mines, at an advance. Stray Parks have also advanced since the dividend has been paid, and buyers still in the market. South Wheal Francis are sought for at an improved price on our last week's quotation. Pennants have been in request, although we are not aware of many having changed hands.

The Bedford United meeting, held on Thursday, gave much satisfaction—the satisfactory report of Mr. Hitchens and Capt. Phillips, entering in detail into the present position and future prospects of the mine, presented, with the improvement in the standard, a positive profit.—The Caradon United Mines meeting presented every encouragement to timid adventurers; and it is ardently hoped that this enterprising company may have a good mine, as a reward for their perseverance and forbearance.

East Tamar Consols' sale of 65 tons of silver-lead ores, realising 1049*l.*, has produced several inquiries for shares; and we firmly believe this mine will soon take a prominent and permanent stand.—The report of Silver Valley having cut a rich lode of silver ores, has created buyers at former prices, but we are not aware of many sales.—Wheal Margaret Tin Mine, near St. Ives, has declared a dividend of 15*l.* per 112th share.

Holmbush has improved a little in price—an improvement in the 100 fm. level, south lode, causing the advance.—Wheal Louisa Lead Mine has been spoken of very favourably.—Herodsfoot and Herodscombe shares have been much in demand, and many shares changed hands.

Business in the following mines has been transacted:—Callingtons, North Pool, Tamars, North Roskear, Stray Parks, West Wheal Jewel, West Maria Tin Mine, Gwinear Consols, Tremayne, Ecton, Buckett, South Wheal Francis, Wheal Russells, Mendip Hills, Tincroft, Wheal Marys, West United Hills, Grambler and St. Aubyn, Franco, &c. &c.—In the foreign mines, several large transactions have taken place in St. John del Rey, Bolanos, Copiapos, Cocaes, Australian, and Barossa Range.

Railways.—Notwithstanding the unsettled state of the Stock Exchange, and the decline in Consols, the Railway Share Market has been pretty steady during the week. Brighton, Dover, and a few others, have improved. Business has, however, been rather limited, owing to dealers and brokers' attention having been taken up with the preparation for the account, which, being a heavy one, and money "stiff," has created more interest than usual. The settlement passed of yesterday without any defaulters being announced.

In the Birmingham, Manchester, Leeds, and Liverpool markets, business has been more active, and prices fully maintained.

Meetings.—The meetings have been rather numerous since our last; and, from the general reports, the returns are satisfactory.—Manchester and Lincoln Union Railway, and Chesterfield and Gainsborough Canal Company: a general and special; to consider and approve of a bill to authorise a deviation in the line, and a bill to incorporate it with the Manchester, Sheffield, and Lincolnshire Company; total of receipts for the railway up to the 9th inst., 91,405*l.* 10s. 11d.; expenditure, 20,437*l.* 2s. 7d.; balance, 70,968*l.* 8s. 4d.; canal receipts, 3874*l.* 19s. 4d.; the various resolutions were carried unanimously.—Norfolk: half-yearly general, being the fourth since the opening of the line; the receipts during the last half-year amount to 45,689*l.* 1s. 2d., being an increase of 7158*l.* 17s. 6d. over the preceding half-year; the balance of 29,387*l.* 11s. 3d. remained available for dividends; a dividend of 3*l.* 10s. per cent. on the stock, and 4s. 11d. on the 22,100 10*l.* shares was declared payable on the 4th of March; resolutions passed.—Shrewsbury and Hereford: second general: there remains a balance of 7400*l.* 18s. 4d. in favour of the company. The future calls during this year will not exceed 2*l.* per share. The Leominster Canal has been purchased for 12,000*l.*; the length is 16 miles, comprehending 150 acres.—Blackwall: half-yearly; the total receipts amount to 34,851*l.* 6s. 9d., being an increase of 3548*l.* 4s. 3d., with the same period of 1845; and the sum available for the half-yearly dividend is 9638*l.* 17s. 2d., being 4s. per share, clear of income tax. It was the intention of the directors to change the present expensive and exclusive system of working by ropes, and adopt locomotive power. From the estimate of Mr. Joseph Locke, the different alterations required, including locomotives, &c., will be 26,046*l.*; the report was adopted, and the heads of a bill, now before Parliament, for a junction with the London and St. Katherine Docks, was read over, and formally sanctioned.—Manchester and Leeds: a meeting, for the amalgamation of this company with the Preston and Wyre Railway, Harbour, and Dock Company, to take effect from the 1st of January last, was confirmed.—Leeds, Dewsbury, and Manchester: general: the gross receipts, since the incorporation of the company, were 282,146*l.*; payments, 217,401*l.*—balance in hand, 64,744*l.*; a bill, for amalgamating with the London and North Western, was approved.—Eastern Union, and Ipswich and Bury St. Edmunds: half-yearly; receipts to the present time, 342,344*l.* 18s. 8d.; balance, 5721*l.* 7s. 7d.—Buckinghamshire: half-yearly; receipts, 169,359*l.* 12s.; expenditure, 35,544*l.* 4s. 6d.; a special meeting was afterwards held for considering the bill for authorising the amalgamation and extensions; the capital of the company amounts to 450,000*l.*; and the proposed extension 10 miles: adopted.—Ambergate, Nottingham, and Boston: half-yearly; no further call will be made until July; the interest on capital advanced, at 4½ per cent., will be payable on the 8th April.—Wharfedale: half-yearly; balance in hand, 9891*l.*, besides 31,000*l.* in 3 per cent. Consols; unpaid accounts, 8196*l.*—Bristol and South Wales: second general: balance in hand, 14,000*l.*—Direct London and Portsmouth: half-yearly; the line has been surveyed, and due notice will be given when another call will be made.—Reading, Guildford, and Reigate: half-yearly; the present capital is 121,708*l.*; expenditure, 41,466*l.*—East Lincolnshire: half-yearly; the receipts up to the 20th inst. were 102,947*l.* 18s. 11d.; leaving a balance of 71,934*l.* 7s.; the agreement with the Great Northern Company was confirmed.—East and West India Docks and Birmingham Junction: the directors have opened negotiations with the London and North Western; a call of 5*l.* per share was announced.—Whitehaven and Furness Junction: half-yearly; the line is expected to be open in a year's time, but, before this, it will be necessary to make a call of 4*l.* per share.—South Wales: fourth half-yearly; the receipts, 301,503*l.*; payments, 227,650*l.*—balance, 73,844*l.*; the total cost of this line is estimated at 13,500*l.* per mile; the negotiations, which had taken place with the Great Western Company, were approved of.—Northern Counties Union: half-yearly; the clauses of the bill were unanimously agreed to; the funds amount to 55,510*l.* 7s. 8d.—Waterford, Wexford, Wicklow, and Dublin: ordinary half-yearly; amount of expenditure, 40,117*l.*; balance in hand, 72,662*l.* A call of 10s., payable on or before the 10th of April, was announced.—Londonderry and Coleraine: ordinary half-yearly general; the deficiency on all the calls amounted to 9000*l.*, and steps are to be taken to recover them.—Lynn and Ely: half-yearly; there remains a balance in hand of 24,761*l.*—Lynn and Dereham: half-yearly; remains a balance of 75,386*l.*—Ely and Huntingdon: half-yearly; a balance in hand of 12,392*l.* 15s.—Oxford, Worcester, and Wolverhampton: half-yearly; Mr. N. T Smith (sec.) read Mr. Brunel's report, showing that very satisfactory progress had been made in purchasing the land, and arranging and letting contracts for works. The whole of the line from Tipton, which is within 5 miles of Wolverhampton, to Charlbury, in Oxfordshire, a distance of nearly 90 miles, in now let, and is in the hands of experienced and responsible contractors; much of the work is progressing rapidly, and upwards of 2800 men are now constantly employed. The long and severe frosts of the past season have necessarily retarded the progress of brickwork and masonry, but not to an important extent, on this line. The balance-sheet showed the receipts to Dec. 1846, to have been 511,890*l.* 8s. 5d.; and the balance in hand 199,440*l.* 3s. 11d.

Leeds, Thursday.—There has been more animation in the share market this week than for some time past, and prices exhibit increased firmness. The announcement of a loan of 8,000,000*l.* being required by Government, had been, in a great measure anticipated by operators, who, not finding stock come forward as freely as was expected, have been compelled to close their accounts, in most cases, at a slight advance; but, for this circumstance, we apprehend we should have had very little alteration in the market. It is understood that the London and North-Western, and Manchester and Leeds Companies have come to a friendly understanding, as respects the working of lines affecting their mutual interests, which has rather improved Leeds stock. Leeds and Thirsks have been in fair demand at 1½*l.* dis.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Feb. 20, was 17,057; amount of money, £71 1s. 5d.

ONE LARGE PUMPING-ENGINE.—TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, Helston, Cornwall, one 80-inch pumping-engine, 10 feet stroke in the cylinder, and 8 feet in the shaft, with three tubular boilers of about 35 tons, a balance-bob and top-piece of rod to each. This excellent engine was erected by one of the first engineers in the county; the air-pumps are lined with brass, and the whole of the machinery possesses great strength and durability. It has done a "duty" equal to the first in Cornwall, and is well worth the attention of any gentleman or company requiring such a powerful machine. The engine will be sold with or without the boilers, balance-bobs, &c., as may best suit the purchasers.

Application to be made to Capt. R. Williams, on the mines.
Dated Godolphin Mines, Helston, Cornwall, February 25, 1846.

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Curious Discovery.—Last week, in one of the shafts of the tunnel at ...igend, the workmen came upon a considerable block of rock salt. Whether ...e is likely to be a vein of that article we have not yet learned, but some hu...ed weights have been excavated. We saw a specimen which is very pure, and ...tes like nitre.—*Perthshire Courier.*

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwenin	6	11
256	Albert Consols	1	4
1024	Alfred Consols	4½	47½–50
235	Andrew and Nangiles	28½	15
1000	Barristown	4½	27½
4000	Bedford	3½	4
128	Besore Lead Mine	14	10
320	Birch Tor Tin Mine	21½	14½
8000	Blaenavon	50	40
100	Botallack	175	225
120	Brewer	5	7
10000	British Iron, New, regis.	10	18½
—	Ditto ditto, scrip	10	19
128	Budnick Consols	53½	45
128	Burthy	20	21
100	Bwlch Cwmerfin	20	—
128	Callestock	17	40
1000	Callington	24	25
256	Caradon Consols	47	5
256	Caradon Copper Mine	9½	1
256	Caradon Mines	15	15
256	Caradon United	24	15
256	Caradon Wh. Hooper	12	5
1000	Carn Brea	15	90
2048	Carmarthen Consols	2	5
112	Charlestown	200	175
166	Cleveland	9	3
1900	Combmartin	7½	4½
1000	Comblawn	½	2
128	Comfort	45	55–60
6000	Con. Tretoil Mining Ass.	5	½
256	Condurrow	20	27½
2560	Cook's Kitchen	2½	4
1000	Copper Bottom	1	5
1024	Gosheen	4½	20
240	Craddock Moor	15½	15
128	Creeg Braws	120	200
500	Cubert Mine	12	27
7100	Derwent	6½	5
1024	Devon & Courtenay Con.	5	3
1000	Dhurode	2	5
186	Dolcoath	30	65
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	40	40
2048	East Crowndale	4½	2½
512	East Combe Silver-Lead	6½	20
128	East Pool	5	14
100	East Relistian	15	20
9000	East Tamar Consols	1½	2½
—	East Wheal Albert	1	3
24	East Wheal Crofty	280	310
—	East Wheal Fortune	—	—
256	East Wheal Kitty	½	1
128	East Wheal Rose	50	1200
123	East Wheal Seton	14	20
512	Fowey Consols	40	45
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	½	¼
1000	Godolphin	25	35
256	Gonamena	21	50
128	Goonvrea	4	5
128	Gover	23	200
244½	Grambler & St. Aubyn	—	41
100	Great Consols	1000	400
256	Great Callestock Moors	22	26
2560	Great Michell Consols	1½	4
256	Great Resugga Moor	2	4
512	Gt. Wh. Rough Torr Con.	2	25
1500	Great South Tolgus	2	3
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	10½
1000	Hanson	14	3
1000	Harrowbarrow Old Mine	6½	3
1000	Harrowbarrow Consols	2	½
800	Hawkmoor	3	2
6000	Heignston Down Con.	½	2½
256	Herodsfoot	14	15
10000	Hibernian	12½	1
—	Hobb's Hill	4	3
1000	Holmbush	18	13–14
256	Ivy Tor	1½	2½
827	Kirkcudbrightshire	4½	6
2048	Lamjeroce Wh. Maria	9	4½–5
128	Lanarth & Penstruthal	190	100
2048	Lanivet Consols	4	2
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	10
1280	Llancynfelin	6	10
256	Lostwithiel Consols	7	7
128	Ludcott	3	3
4000	Marke Valley	10	3½
5000	Mendip Hills	2	2
20000	Mining Co. of Ireland	7	8½
256	New East Crowndale	3½	3½
128	North Fowey Consols	20	22
100	North Pool	85	100
70	North Roskear	10½	300–10
256	North Treburget	4	5
100	North United	41	20
256	North Wh. Abraham	½	20
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	7
256	North Wheal Rose	26½	13
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
128	Par Consols	900	1000
1024	Pembroke	1½	6
256	Penhallow Moor	15	4
4000	Pennant	1	2½
100	Penrhiw	30	65
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	84
512	Plymouth Wh. Yeoland	2½	5½–6
2048	Prince Edward	1½	1½
112	Providence Mines	35	45
256	Redruth Consols	3	10
10000	Rhymney Iron	50	30
256	Rose Consols	10	11½
1000	Rosewall Hill	1	5
—	Shotts Iron Company	55	70
2500	Silver Valley	4	3
256	Sourton Consols	3½	3
128	South Caradon	10	400–10
2000	South Dolcoath	2	—
256	Sth. Friendsh. Wh. Ann	14	14
200	South Harvannah	23	26
9000	South Tamar	½	½
256	South Tolgus	2½	15

BRITISH MINES—continued.

Shares.	Company.	Paid.	Price.
800	South Towan	10	1½
256	South Trelawney	15½	15
128	South Yeoland	16½	20
128	South Wheal Basset	110	110
124	South Wh. Francis	160	190
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2
256	South Wheal Rose	1½	1
10000	Southern & Western, Irish	2	4–5
256	St. Austell Consols	8	16
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	7
1000	Stray Park	43	24½
9600	Tamar Consols	8	5½
1024	Tavy Consols	3½	2½
6000	Tincroft	7	16
256	Ting Tang	15	10
128	Tokenbury	140	17½
256	Trehane	2	20
5000	Treleigh Consols	6	3
256	Trenow Consols	30	40
96	Tresavean	10	200
120	Trethellan	5	35
120	Treviskey and Barrier	130	140
256	Trewollack	20	25
128	Trewellard	12	26½
6000	United Hills	5	5
100	United Mines	300	500
10240	Victoria Tin	1	1
256	Wellington Mines	15	30
128	West Basset	45	10
256	West Caradon	20	160
128	West Cargoll	2	12
512	West Fowey Consols	40	35
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	9½	25
200	West Seton	40	40
120	West Trethellan	5	25
256	West United Hills	2½	6
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	1½	3½
256	West Wheal Shepherd	5	2
256	West Wheal Tolgus	21½	6
256	West Wheal Treasury	14½	7
240	Westerlake	3	3
5200	Wicklow Copper	5	15½
184	Wheal Adams	41	30
1000	Wheal Agar	—	—
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	1½	4
237	Wheal Anderton	16½	32
128	Wheal Ann	—	50½
128	Wheal Arvose	2	3
2560	Wheal Barbara	1½	1½
256	Wheal Benny	6½	5½–6–7
256	Wheal Blencowe	8	10
256	Wheal Bucketts	20	23
256	Wheal Byon Consols	½	½
136	Wheal Clifford	190	190
1024	Wheal Concord	6½	4
128	Wheal Courtenay	—	20
6000	Wheal Curtis	1½	1½
256	Wheal Dyke	12	13
512	Wheal Elizabeth	2½	3
256	Wheal Fortescue	5½	10½
2048	Wheal Frederick	2	2
384	Wheal Franco	25	25
256	Wheal Gill	19½	18
1024	Wheal Grace	2	2½
128	Wheal Harriet	45	50
2048	Wheal Holwell	1½	1½
256	Wheal Jane	11	30
256	Wheal Kekewich	4	4
256	Wheal Louisa	6½	10–12
256	Wheal Maria (Hayle)	19	30
1024	Wheal Maria	1	500
4000	Wheal Martha Consols	5	—
256	Wheal Mary Ann	5	60
1024	Wheal Mary (Calstock)	5	1
256	Wheal Mary Consols	34	25
256	Wheal Mary (Lanivet)	6½	7
256	Wheal Mary Pentuan	2	6
256	Wheal Maude	1½	1½
128	Wheal Metha	23	100
128	Wheal Pollard	12½	12
240	Wheal Prospect	4	13
128	Wheal Reeth	1	17
128	Wheal Rose	60	50
99	Wheal Seton	150	800
1024	Wheal Spearne	1½	8
256	Wheal Sisters	27½	22½
—	Wheal St. Ann	6½	3
250	Wheal Trelawney	7½	130
256	Wheal Tremayne	35	50–60
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	150
128	Wheal Venland	12½	10
127	Wheal Virgin	50	60
256	Wheal Vlow (Perranz.)	½	½
1024	Wheal Walter	4	2
256	Wheal Williams	2	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	4½
15000	Asturian Mining Co.	9	6
20000	Australian	2	6½–⅞–⅝
10000	Anglo-Mexican Co.	100	1
12374	Ditto Subscription	25	2½
600	Barossa Range	4	50
3000	Bolanos	150	6½
3000	Ditto Scrip	15	—
12000	Brazilian Imperial	20	2½
10000	Cobre Copper Co.	40	26½
12500	Colombian Co. regis.	55	4½
8000	Ditto Scrip	—	
5000	Copiapo Mining Co.	14	3½
10000	General Mining Ass'n.	20	15½
20051	Mexican Company	59	—
5000	Mocanbas & Cocaes	25	4½–5–5½
29320	Rl. del Monte, regis. / Ditto unregistered	28½	av. 3½
	Ditto Red Debentures	—	19
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	110
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11009	St. John del Rey	15	8½
43174	United Mexican	28½	2½

SOUTH AUSTRALIA SHARE MARKET.

Mines.	Capital.	Shares.	Prices.
Burra Burra	£12,320	2464	£95–97½
Adelaide	10,000	2000	6–6½
Victoria	1,200	600	2
Wakefield	1,000	500	2½–2⅝
Greenock Creek	1,000	200	13
Grand Junction	21,800	—	28–30
Princess Royal	—	—	250
Poonawurta	—	—	9½–10
Paringa	—	—	30
Royal South Australian Company	—	—	5 p. ct. pm.

LATEST CURRENT PRICES OF METALS.

LONDON, FEBRUARY 26, 1847.

	£	s.	£	s.	d.
Iron—Bar *a*..Wales..*ton*	0	0—	8	0	0
„ ..London	0	0—	10	0	0
Nail rods „	0	0—	10	10	0
Hoop (Staf.) „	0	0—	12	0	0
Sheet „ „	0	0—	13	0	0
Bars „ „	11	0—	11	10	0
Welsh cold-blast foundry pig	5	5—	5	10	0
Scotch pig *b*, Clyde	3	13—	3	15	0
Rails, average	9	10—	9	15	0
Russian, CCND *c*	0	0—	—		
„ PSI	0	0—	—		
„ Gourieff	0	0—	—		
„ Archangel	0	0—	13	10	0
Swedish *d*, on the spot	11	10—	11	15	0
„ Steel, fagt.	0	0—	17	0	0
„ „ kegse	15	0—	15	10	0
Copper—Tile *f*	0	0—	92	0	0
Tough cake	0	0—	93	0	0
Best selected	0	0—	96	0	0

	£	s.	£	s.	d.
Copper—Ordin. sheets, *lb.*	0	0—	0		10½
„ bottoms	0	0—	0		11½
Yellow Metal Sheathing	0	0—	0	0	8½
Tin—Com. blocks *g*..*cwt.*	0	0—	4	18	0
„ bars	0	0—	4	19	6
Refined	0	0—	5	1	0
Straits *h*	4	17—	4	18	0
Banca	0	0—	5	1	0
Tin-Plates—Ch., IC *i*, *box*	1	9—	1	11	0
„ IX	1	15—	1	17	0
Coke, IC	0	0—	1	7	0
„ IX	0	0—	1	13	0
Lead—Sheet *k* ...*ton*	19	5—	19	10	0
Pig, refined	0	0—	21	0	0
„ common	0	0—	18	15	0
„ Spanish, in bd.	17	10—	18	0	0
Spelter—(Cake) *l* on spot	0	0—	22	0	0
„ „ for arrival	0	0—	21	0	0
Zinc—(Sheet) *m* export.*	0	0—	28	0	0
Quicksilver *n* ...*lb.*	0	0—	0	4	6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto. In kegs ½ and ⅝-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

Iron.—Very little done this week in Welsh and Staffordshire, but several sales have been made of Scotch pig at 73s. 6d. to 74s., cash, for mixed Nos., and this market is looking firmer. Swedish is in more request, and about 450 tons were taken up yesterday.

Copper is steady at quotations.

Tin.—English is still in good demand and stocks low; foreign has not been much in request lately, and the price is not quite so firm as it was; we have had several arrivals recently, but the largest portion is appropriated.

Lead is in good request, chiefly for home use, and the stock in London is unusually bare.

Spelter continues dull, and no sale of the least consequence, either on the spot or for arrival, has been made for the week.

[*Communicated by Messrs. Whitcomb and Barton, Old Broad-street.*]

The demand for all kinds of manufactured iron continues good—prices unaltered; Scotch pig-iron has been slightly dealt in during the week, it is reported at rather better rates. The market, however, is very quiet, and scarcely any disposition manifested to buy at quotations except small lots for immediate consumption. English copper is in demand at the late advance, which it is believed will be firmly maintained. English lead is looking up, and very fair business doing. Tin-plates continue dull of sale. In other metals, no alteration.

GLASGOW PIG-IRON TRADE, Feb. 24.—The market for pig-iron is rather inert—prices for some time have continued nearly stationary. There is very little demand at present rates; yet, about 1s. under our quotation would find buyers to some extent. We have seldom seen less iron pressing on the market; holders are buoyed up with the hope of having a good spring demand, which prevents any further decline in prices for the present. Since our last there have been few transactions, at 73s. 6d. and 74s., of mixed Nos.—cash. To-day, 74s. 6d. is the price asked. Contracts, to some extent, for delivery at Midsummer, have been made at 75s.

CALCUTTA, Jan. 7.—We have again to report an inactive market for all metals—the sales of the past month having been to a most insignificant extent. There has been some inquiry for sheathing and brazier's copper, and a slight reduction on our quotations (which are above those current at the date of our last) would probably enable holders to realise to a moderate extent—but this they will not submit to; tile is in even less demand, and prices have given way about 4 to 6 annas a maund. Iron has been more wanted, but the dealers have not as yet come up in their offers, and holders are equally determined not to give way, so that scarcely any business has been done. In spelter some sales are reported at rs. 9 2, being a decline of 8 a. since our last. Other holders are, however, showing more firmness, and will not submit to lower rates—looking, as they do, at the light stock on hand.—The imports in December were as follows:—

	Maunds		Maunds
Copper—Tile and ingot	1632	Iron—Hoop	3389
„ Nails	27	„ Sheet	5857
„ Sheet and plates	1224	„ Swedish	4917
„ Slab	209	„ Pig	2178
„ Old	663	„ Nails	136
Iron—Bar, bolt, and rod	13080	Spelter	2632

EXPORTATION of the PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Gold bars to Belgium	3,000 ounces.
Gold coin to New York	770 „
Ditto to Mauritius	£1,000
Silver coin to Belgium	6,000 ounces.
Ditto to Rotterdam	4,000 „
Ditto to Mauritius	£1,000
Silver bars to Cuxhaven	43,000 ounces.

COPPER ORES.

Sampled Jan. 10, and Sold at Farquharson's Hotel, Truro, Feb. 25, 1847.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
United Mines	114	£3 18 6	Tresavean	100	£4 13 0
ditto	111	4 7 6	ditto	69	4 13 6
ditto	102	8 2 6	ditto	57	7 7 0
ditto	93	6 18 6	ditto	51	15 1 0
ditto	91	4 5 0	ditto	50	4 13 6
ditto	87	3 17 6	ditto	33	3 0 6
ditto	80	7 17 6	Treleigh Consols	82	10 15 6
ditto	78	4 6 0	ditto	77	4 2 6
ditto	75	8 4 6	ditto	55	3 11 6
ditto	68	4 15 0	Par Consols	82	5 15 6
ditto	67	3 8 6	ditto	59	5 3 6
ditto	66	5 14 0	ditto	54	10 7 6
ditto	55	8 16 0	West Wh. Jewel	57	4 18 6
ditto	53	7 8 0	ditto	55	1 14 6
ditto	41	4 11 0	ditto	54	4 6 6
ditto	33	5 0 6	Wh. Sisters	65	7 11 6
South Caradon	166	7 13 0	ditto	45	10 13 6
ditto	96	9 6 6	ditto	40	5 16 0
ditto	83	7 14 0	North Downs	64	6 19 0
ditto	51	5 5 6	ditto	16	6 14 0
ditto	41	4 11 0	West Trethellan	43	3 3 0
			South Tolgus	37	6 6 6

TOTAL PRODUCE.

United Mines	1214	£6869 5 0	West Wh. Jewel	166	£609 3 0
South Caradon	383	2846 19 6	Wh. Sisters	150	1264 15 0
Tresavean	360	2307 13 0	North Downs	80	552 0 0
Treleigh Consols	214	1397 16 0	West Trethellan	43	135 9 0
Par Consols	195	1339 2 6	South Tolgus	37	234 0 6

Average Standard ....£112 2 0 | Average Produce 8
Average Price per ton £6 4 6
Quantity of Ore ....2842 tons. | Quantity of Fine Copper, 225 tons 16 cwts.
Amount of Money £17,496 3 6
LAST SALE.—Average Standard ......£ 97 0 0.—Average Produce 9¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	299	£2305 5 6
English Copper	370	2001 0 6
Vivian and Sons	815	5230 8 6
Freeman and Co.	368	1932 6 10
Crown Copper Company	18	65 10 10
Sims, Willyams, and Co.	324	1914 9 6
Williams, Foster, and Co.	645	4047 2 4
Total tons	2842	£17,496 3 6

Copper ores for sale on Thursday next, at Serpell's Hotel, Pool.—Mines and Parcels—North Roskear 998—Consolidated Mines 770—Tincroft 403—Fowey Consols 306—Wheal Seton 252—Creeg Braws 245—South Wheal Francis 131—Wheal Harriet 115—South Roskear 108—Lanivet Consols 90—Hayle Slag 82—Tretoil 52—West Fowey Consols 44.—Wheal Buller 18.—Total, 3614 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea Mines 744—United Hills 321—Par Consols 253—Wheal Prosper 247—Alfred Consols 211—Levant 133—Trenow Consols 74—North Wheal Basset 53—Cook's Kitchen 23—Wheal Ruby 14—Wheal Agar 12.—Total, 2085 tons.

COPPER ORES

For Sale, at SWANSEA, March 10.—Berehaven 119, ditto 116, ditto 102, ditto 100, ditto 86, ditto 35, ditto 67.—Knockmahon 125, ditto 82, ditto 78, ditto 72, ditto 25.—Cobre 91, ditto 90, ditto 81, ditto 82, ditto 70.—Recompensa 84, ditto 51, ditto 60, ditto 31, ditto 6.—Burra Burra 54, ditto 52, ditto 50.—Chili 50, ditto 42, ditto 49, ditto 3.—Kapunda 79, ditto 28, ditto 22, ditto 9.—Ballymurtagh 48.—Holyford 23, ditto 16.—Sydney 23.—Princess Royal 10.—Paringa, 8.—Total, 2280 tons.

LEAD ORES.

Ticketings at the King's Arms Hotel, Holywell, Feb. 16, 1847.

Mines.	Tons.	Price.	Purchasers.
Foxdale (Isle of Man)	100	£12 2 0	Walker, Parker, & Co.
Frongoch	40	10 12 6	ditto
Eastloglas	20	10 17 6	ditto
Darren	8	16 17 0	Newton, Keates, & Co.
Eastloglas	27	10 18 0	ditto

Douglas, Isle of Man, Feb. 20.—Ticketings for about 80 tons Laxey Lead Ores.

Per ton of 20 cwts., dry weight, free on board		£20 18 0	Walker, Parker, & Co.
Ditto	ditto	20 7 0	B. Somers.
Ditto	ditto	19 12 6	J. T. Treffry.
Ditto	ditto	19 10 6	Tamar Smelting Co.

Amount of sale ....£1672.

Sold at the Mine on the 15th of February, 1847.

Mine.	Tons.	Price.	Amount.	Purchasers.
Herodsfoot	25	£15 15 0	£393 15 0	Combmartin Co.

Sold at the Mine on the 22d February, 1847.

Mines.	Tons.	Price.	Amount.	Purchasers.
East Tamar Consols	65	£16 3 0	£1049 15 0	Tamar Smelting Co.

Sold, at the Mine, on the 24th February, 1847.

Mines.	Tons.	Price.	Amount.	Purchasers.
Wh. Trelawney	68	£15 16 0	£1074 8 0	Combmartin & N. Devon Co.

PRICE OF MATERIALS,

As Charged at the Stray Park Mines in the following months of 1846:—

Description.	Sept.	Oct.	Nov.	Dec.	
Coal, carriage included	15*s.* 0*d*	15*s.* 0*d*	15*s.* 0*d*	15*s.* 0*d*	per ton.
Timber, balk	1 3	—	—	—	per foot.
Iron, common	10 0	10 0	10 0	10 0	per cwt.
„ faggoted	—	—	14 0	—	„
„ hoop	—	14 6	14 6	14 6	„
Nails, patent	19 0	19 0	—	19 0	„
Rope	34 0	—	—	—	„
Yarn	0 4½	—	—	—	per lb.
Hemp	0 4	—	—	0 4½	„
Tallow, best	—	47 6	—	—	per cwt.
Grease, patent	—	—	18 0	—	„
Oil, rape	—	3 0	—	—	per gall.
Lead, white	—	26 0	26 0	—	per cwt.
Leather	—	1 2	—	—	per lb.
Candles, best	5 6	5 6	6 0	6 0	per doz.
Powder	36 0	36 0	36 0	36 0	per cwt.
Hilts, shovel	—	3 0	—	—	per doz.
„ pick	—	—	1 4	—	„
Shovels, iron	34 0	—	—	—	per cwt.
Whim kibbles	19 0	10 0	19 0	19 0	„
Wash tubs	4 3	—	—	—	each.
Engine shag	0 6	—	—	—	per yd.
Safety fuze	0 4	0 4	0 4	0 4	per coil.

LONDON AND WESTMINSTER BANK.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the proprietors of this company will be HELD at the bank, in Lothbury, on Wednesday next, the 3d day of March, at One o'clock precisely, to declare a dividend, to submit for confirmation the election of Joshua Walker, Esq., who has been nominated by the board of directors, in the room of Patrick Maxwell Stewart, Esq., M.P., deceased; to appoint three directors in the room of Thomas Farncombe, Esq., David Salomons, Esq., and Henry Rosanquet, Esq., who go out by rotation, but, being eligible, offer themselves for re-election; also to consider the propriety of appointing two additional directors, to proceed to such election, and for other purposes. 35

The following two gentlemen, being duly qualified, Henry Buckle, Esq., and John Garrett Cattley, Esq., have proposed themselves as such directors, and have given the necessary notice. By order of the board,

Lothbury, Feb. 27, 1847. JAMES WILLIAM GILBART, General Manager.

The transfer books will be closed from the 15th of February until the 10th of March, to prepare for the dividend.

PENNANT LEAD AND COPPER MINING COMPANY.—NOTICE.—The directors of the PENNANT LEAD AND COPPER MINING COMPANY hereby give Notice, that the shareholders, by an unanimous vote, have resolved to REDUCE the NUMBER of PARTS, or SHARES, of this association, from 6000 to 4000; and that, henceforth, all transfers and other documents will be altered accordingly. J. C. RIDGWAY, Chairman. 36

4, Salisbury-street, Strand, Feb. 16, 1847.

PATENT TIDAL WHEEL COMPANY (Provisionally Registered).—The directors of this company beg to inform those parties who are desirous of obtaining LICENSES for the USE of their PATENTED INVENTION, that, their deed of settlement being in course of preparation, they will now be happy to RECEIVE their PROPOSALS, and enter into arrangements for the same.

By order, FREDERICK BENNETT, Secretary. 37

1, Walbrook-buildings, Mansion-house.

STEAM COAL—WITHOUT SMOKE, as per experiments made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.)

OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846. 38

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Tuckingmill, Cornwall. 39

TO SMELTERS AND OTHERS.—WANTED, by a Gentleman, AN AGENCY, for the SALE of METALS, suitable for the Birmingham market—having a good connection amongst consumers in that and the neighbouring towns.—For further particulars apply to "R. S.," at *Aris's Birmingham Gazette* Office, Birmingham. 40

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.

In our last Journal, we published an interesting statistical account of the Joint-Stock Banks of London, for which we were indebted to a pamphlet, entitled *A Review of the Private and Joint-Stock Banks in the Metropolis*, by JAMES KNIGHT, and published by Effingham Wilson. We intended a review of the pamphlet to have appeared in the same Journal; but which being omitted, with others, caused the article to be published without an acknowledgment of its source.

THE MINING JOURNAL
And Atmospheric Railway Gazette.

LONDON, FEBRUARY 27, 1847.

We have to direct attention to the bill now before Parliament—that of the Commissioners' Railway Act—which has been introduced, but more particularly those parties who convey their produce, whether iron, coals, merchandise, &c., by their own engines and waggons. The bill is general in its nature for the regulation of railways, bringing before the Commissioners all bills relating to railways pending before Parliament; surveys; compliance with Standing Orders; the opening of railways; tolls, fares, and charges of railway companies; times of departure, and arrival of railway trains; cheap trains; conveyance of naval, military, and police forces; stores and ammunition; dispute between railway companies, having continuous lines of railway; power of Commissioners to call for returns from railway companies; exercise by Commissioners of their powers of inspection and inquiry, and the provision to be made, for defraying the expenses thereof; bye laws made by railway companies; police near railway during the making thereof; recovery of forfeitures and penalties; and other points of immaterial importance—such being the principal points to which attention is directed The clauses more immediately affecting the mining interest are those relating to the tolls, fares, and charges—the bye laws of railway companies—viz.: by the provision of this Act, that every railway company shall, from time to time, make such returns to the Commissioners in such form, and within such time, as the Commissioners direct, of the tolls, fares, and charges, which such company is entitled to demand, and which may be taken by such company; a table of all tolls, fares, and charges, to be set up at the stations, and in case of neglect to forfeit 20*l.* for every day. Every railway company to give the Commissioners 30 days' notice of their intention, to make any alterations in their tolls, fares, and charges, and 15 days' notice to the public, of such alterations, by placards affixed at all the stations on every part of the line of railway to which such alteration applies, and if the company alter their tolls, fares, or charges, and take any increased toll, fare, or charge, that they shall for every such increased toll, fare, or charge, so taken, forfeit to her MAJESTY the sum of 20*l.*; tolls may be reduced without notice in special cases; Commissioners to report to Parliament, as to tolls, fares, and charges; Commissioners to call attention to inequalities in tolls, fares, and charges, on such lines of railways which appear to them to be excessive, or otherwise to require the interference of Parliament. With respect to bye laws made by railway companies, it sets forth that all railway companies shall send copies of bye laws to Commissioners when required, penalty for default, 20*l.*; no new bye law to have force till allowed by Commissioners; Commissioners to allow or disallow bye laws sent to them for that purpose; Commissioners may disallow existing bye laws. It is pleasing to find there are provisions in the said bill for recovery of forfeitures in a summary way, by summoning in England and Ireland the offending party before two justices, and in Scotland before the sheriff—such penalty to be levied by distress and sale, and looking to the powers proposed to be granted by the bill, it will be seen that it is one of great importance to the mining interest and the public, and one which will, we doubt not, be valued.

We need not go further back than last session to find proof of the necessity for a strict system of railway supervision being observed by some independent body, to whom cause of complaint can be made, and whence it may be rectified; for it will, doubtless, be remembered, that the coal proprietors of Lancashire then succeeded, at a great expense, against a powerful resistance on the part of the railway companies, in procuring the insertion of a reasonable maximum rate for the transit of coal, &c.; and, although such rate was fully proved to be such as would yield a profitable return to the railway companies, yet in several parts of the coal districts this benefit to the public is, in a measure, withheld by railway companies not furnishing a regular and sufficient supply of locomotive power, and by a variety of other charges demanded, in order to make up for the reduction of tolls—such as dues, charges for weighing, wharfage, &c. Hitherto there has been no practical remedy, and the present bill must be hailed as a boon, not only by the public, but by the coal trade. It is well known that a large quantity of coal, &c., from the Staffordshire, Lancashire, and other northern coal fields, would reach the London markets, if companies were prepared to find sufficient locomotive power and waggons, and adhere to a maximum of tolls. A deputation from the coal proprietors of Lancashire is, we find, now in London, in support of the measure; while we need hardly observe, that the subject is one of the first importance as regards themselves and the public at large. We may further observe, that canals will soon be under the control and management of railways, either by lease or purchase.; and, on looking over the clauses as to the interpretation of the word *railway*, it would appear that such was intended to mean "a railway, and the works belonging thereto—constructed, or to be constructed, under the authority of any Act of Parliament." Canals, or other works, purchased by any railway company, or leased, should, to make it perfect, be inserted also; as they will be all under the same board, and should be subject to the provisions of this bill; also, in the clause where Commissioners may allow, or disallow, existing bye laws. Every person using the said railway with engines, waggons, &c., should have a copy of the bye laws submitted to him, with a reasonable time to make any objections to the Commissioners, so that the Commissioners might be able to judge correctly as to the necessity between the party complaining, and the railway company. The coal trade is not by any means quoted as the only parties suffering—we believe the bill will be a general benefit to all parties using or sending anything by railway—but it being more in our province, to notice whatever affects the mining interest generally, and we have thus taken up the subject.

The *Moniteur Industriel* of the 18th inst. quotes our Paris Correspondent's letter of the 6th, in that part which concerns his observations respecting the manner the Government contracts for coal and iron are conducted by the authorities in France, particularly the Marine Department. The *Moniteur* has the candour, however, to acknowledge, "that our correspondent is active, and generally well informed; but that he has shown himself the fanatic partisan of the *Salle Montesquien* league, of which he appears to know all the secrets and projects, and often more their guide than their confidant." Our susceptible contemporary considers that the national honour of France is compromised, if the remarks, or *calomnies*, against the authorities are allowed to be thus exposed by our Journal to the whole world; and if these abuses do really exist, it is more imperious, for the credit of the country, that such a criminal disorder in the state of the French administrations should be investigated. We should not have noticed the remarks of the *Moniteur*, which attempts to be the advocate of the monopolist party, against a revision of the import duties, on foreign iron, coal, and machinery, under the pretext, that the ironmasters, &c., can supply a sufficiency to meet the demands—we have no desire to continue controversy with our friendly antagonist, on a subject we have already so fully substantiated to be incorrect; yet we must say that, but for the *exposé* of the "favouritism" shown—not to say *peculation*, by the *employés* high in office, respecting contracts, with which our correspondent is well acquainted—he might state more, without being "the fanatic partisan of either party," but only the advocate of justice to mineral industry, and the opponent of a monopoly which is most injurious to the welfare of France in her relations with other countries, by the exaction of import duties, next to prohibitory, to support the interests of a few.

THE COPPER TRADE.—In the course of the proceedings at the House of Commons, on Monday evening, Mr. Muntz said, "He regretted to hear the Chancellor of the Exchequer declare that he would not consent to a repeal of the import duties on copper ores. The amount of the duty from the smelting in Chili had already reduced from 70,000*l.* to 40,000*l.* per annum, and, if the duty was continued, would probably next year reduce to 20,000*l.* This was a paltry sum for the consideration of a Government, particularly when the important interests of smelting and manufactures were considered. To save that 20,000*l.* of duty, probably five times that amount would be indirectly lost to the nation, without any benefit to the miners. The ingot copper would be sent direct from South America to France, and other parts of Europe, and at from 8*l.* to 9*l.* per ton less than our manufacturers could obtain it here."

SCOTCH IRON TRADE.—We understand, the directors of the Ayrshire Malleable Iron Company have effected an amalgamation with the Blair Iron Company, whose works, for the making of pig-iron, have been carried on with such eminent success for the last three years. There has been three blast-furnaces at work during the greater part of this period; and two new ones have been erected, and will very soon be in blast. The entire make of these furnaces will be converted into finished bars and rails as soon as the forges and rolling mills are completed—the most suitable site convenient to the furnaces having been chosen, which will give the joint company advantages over any similar work of the kind in Scotland. The supply of fine coal and ironstone, held under a long lease, is very abundant; and the Ayrshire Railway, passing within a few yards of the works, affords great facilities for conveying the finished material to Glasgow, or any of the shipping ports. The joint company is now called the Ayrshire Iron Company, and the stock is at a high premium.

ELECTRIC TELEGRAPHS.—Now that telegraphic communication has become an indispensable agency, we are glad to find it is about being applied to mining purposes: in another column will be found a notice of Messrs. Brett and Little's Telegraphic Converser; and, we are informed, one of the first objects of the patentees will be, to test its utility in affording means of instantaneous communication in different parts of deep and extensive mines. Of course, we feel interested in such an attempt, and shall not fail recording all particulars.

REDUCTION OF CARRIAGE FOR MINERALS ON THE FRENCH RAILWAYS.—The directors of the different railways in France have come to the wise resolution of reducing their prices generally along all the established lines on metallic and mineral produce, and have issued their tariffs of charges, which are not more than one-half those hitherto levied. This alteration will give a great impetus to mining industry, as the high price of fuel, and the want of moderate transit from the mines and furnaces to the markets, have been for years a great drawback to speculation. The establishing of railways in France, and throughout the continent, will be one of the most beneficial revolutions in favour of industry of every description that has taken place within the memory of man, and will be the means of more fully developing their resources. The enterprising spirit in this country has shown to all nations what may be attained by the facilities of railways and power of steam, in advancing not only mineral, but every branch of the commercial riches of the four quarters of the globe, of which England stands pre-eminent.

INSPECTION OF THE PARIS AND ST. GERMAIN ATMOSPHERIC RAILWAY.—On Sunday morning, at about nine o'clock, a special train of the Paris and St. Germain Railway, left Paris with the Minister of Public Works, and the committee charged to examine, and, if satisfied, authorise the opening to the public of the portion of the line which connects, by means of the atmospheric principle, the station of Pecq, with the town of St. Germain. The committee consisted of MM. Arago (president), Cordier, Vauvilliers, Pouillet, Piobert, Mallet, Combes, Bineau, &c. A great number of persons who had received invitations, went by this train. The Minister of Public Works, on arriving at the atmospheric portion of the line, visited every part of the works, and, in conjunction with the committee, ordered several experiments to be performed, in order that they might be convinced of the power and security of all the means employed. After this visit of inspection, which appeared to give general satisfaction, the ministers and the members of the commission returned to Paris.

EXTRAORDINARY STEAM HAMMER FOR FORGING IRON.

There has recently been erected in the yard of Messrs. Peter Cato and Co., south end of the Brunswick Dock, a huge hammer, worked by steam, on the plan and construction patented a short time ago by Mr. James Nasmith, of Patricroft, near Manchester—an invention which will prove a valuable addition to the apparatus hitherto employed. The whole machine, and the furnace for bringing the iron to be wrought to a malleable white heat, are fixed under a large shed, open on three sides, and smoothly paved with fire tiles. The frame of this hammering engine (for so it may be called) consists of a massive flattish iron casting, forming a kind of arch, with strong abutments in the same piece, the whole well secured below, the bedding being on piles, as the ground in this quarter is forced. In the interior, or opening of this arch, there are at its top part, which is partly filled up, perpendicular lateral grooves in the iron, to guide, in its descent and elevation, the heavy hammer, which maintains its vertical position, and is worked by a piston and rod, moving up and down with any required rapidity within a vertical cylinder, fixed on the top of the arch, and supplied with steam from a pipe overhead, connected with the boiler that supplies steam for the general machinery of the yard. The cylinder is 13 inches in diameter, and the extreme length of stroke of the hammer—a long square block of iron, weighing 22 cwts.—is, from its top elevation to the anvil, 3 feet. The extreme force of the blow that may be given is equal to about five tons; but this may be instantly reduced to the most gentle tap, or any immediate force between the two. The face of the hammer is flat, as is that of the anvil, which weighs 6½ cwts. One grand advantage is, that the face of the hammer being still a horizontal plane, whatever the thickness or shape of the iron to be beaten may be—a decided improvement over the ordinary tilt hammer—which, from its being fixed at the extremity of a bar, hits, on its descent, at continually varying angles of its face, the iron to be forged, according to the various thickness of the iron operated upon—the face, in fact, being horizontal at only one point. The principal of the steam hammer is that of the piling-machine, as the blow derives little or no force from the steam, but is imparted by the rapid descent of the falling mass suddenly let loose by cutting off the steam. There is an ingenious combination of long screws standing perpendicularly, and a valve and other handles, worked by one man, standing on a small elevated railed platform on one side the framework; and it is surprising with what rapidity and precision the *length* (downwards), as well as the power of the blow, can be regulated by an adept, so as to strike the hot iron, whatever its thickness, with the required force, and nothing more. A walnut may be cracked without bruising the kernel. Not only is the hammer a powerful means of fashioning iron knees, knee moulds, anchors, moulds, &c., and other heavy work; but it is applicable to the forging into moulds all kinds of scrap iron, from rivet-holes or clippings, old nails, broken bolts, &c., &c. We witnessed this redeeming process with surprise and gratification. The scrap iron is made up as best may be into squares or piles. One of these is put into the furnace, and in a very short time, attaining a white heat, is welded or united together in one glowing mass. A long bar of iron is then introduced into the furnace; and the end of it being put upon the top of the mass, becomes almost instantly combined or united with it. The mass is then drawn out by the bar, and conveyed rapidly on an iron waggon, commonly called a trawley, from the furnace mouth to the anvil—the top of the waggon being precisely of the same height as both. A single man holds the bar, and by it turns the iron as required, while the ponderous hammer is let down upon it, in blows that shake the adjacent ground for some distance around, and deals with the glowing iron as if it were as soft as putty, crushing out of it all the bad, and leaving the good. Comparatively few blows are required to form it into a square bloom, ready as new iron to be beaten out or attenuated at minor forges into any required form or article. The scrap iron, which is worth only about 5*l.* per ton, is by the operation rendered of the value of 10*l.* to 12*l.* The chimney of the furnace is of curious construction. It is cased round with common brick to the top, supported below on four cast-iron pillars, and secured with tension rods outwardly secured at the four angles. There are also openings in the casement. By this means the fire bricks of the chimney, which frequently require renewal from being burnt away, may be taken out at any part, and replaced by new ones.—*Liverpool Standard.*

ACCIDENTS.

Park Colliery, Westleigh, Lancashire.—C. Burton and J. Cunliffe have die, from the effects of burns received during an explosion here, on the 28th ult when 10 persons were dangerously injured.

Cwmllynfell, Languike.—T. Rees was killed at Messrs. James and Aubrey's Pit.

Castle Eden Colliery.—J. Hepplewhite was killed by falling from the high to the second floor of the engine-house, while engaged repairing the fly-wheel.

Bury, Lancashire.—G. Aspden was killed in a quarry at Edgworth Moor.

Holly Hall, near Dudley.—J. Barnes was killed at Messrs. Philpotts's Pit

Wednesbury.—R. Longmore was killed at Messrs. Botteley and Tildesley's.

Oldbury.—S. Wright was killed by a fall of coal in one of Capt. Bennett's Pits.

Walbut's Colliery, Bilston.—A miner, named Collier, incautiously used a lighted candle, which caused an explosion, burning him in a dreadful manner.

Glanddu Colliery, Gelliguer.—W. Jenkins was killed by a fall of coal.

West Hallam, Derbyshire.—As W. Hartshorn, having done for the day, was in the act of quitting the pit, in company with another boy, in an iron chain, and on getting half up the shaft, the return chain was descending, when one of the loops in which the men are conveyed down, fell upon his head, and passed round his neck, upon which an alarm was given, and the engine reversed, when the unfortunate deceased was forced out of the chain in which he was seated, and dragged to the top of the shaft, suspended by the neck, and when taken out he was found dead.

Fatal Mine Accident at West Bromwich—Perils of a Miner.—Another accident from a fall of coal, followed by fatal results, occurred here on Tuesday, at Mr. Horton's coal-pit. As T. Deeming, along with several fellow miners, were engaged in one of the workings, "undergoing" a huge mass of coal, William Nard, of Oldbury (the "doggy"), cautioned Deeming and several other of the workmen to stand clear of the coal; this warning, however, seems to have been disregarded—as in about two minutes after it had been given, the great mass, weighing about 8 tons, fell, instantaneously crushing Deeming to death, and putting in great jeopardy the life of a man, named John Millard, who was standing beside him at the time. The poor man, who was thus so suddenly deprived of life, had been singularly unfortunate—scarcely an accident occurring in a pit where he was at work, that he was not one of the sufferers: 18 times had he been injured in coal-pits, and carried home, having his thighs broken at one time—his ribs at another—at other times burned. At the time of the accident which resulted in his death, he was a cripple from injuries formerly received in pursuit of his occupation.—*Birmingham Journal.*

Bilston.—R. Jones was killed by a fall of coal at the Capponfield Colliery.

Clay Cross.—J. Bacon, having finished his day's work, was ascending the shaft with his son, the cap attached to the rope, not being fitted close, caught on the cross bar under the chair, and took them up seven or eight yards, when it slipped off, and the deceased and his son falling on the chair, so injured the spine of the father, that he expired.

DIED,—At the Twmpath, near Pontypool, aged 84, Mr. Nicholas Grigg, for upwards of 40 years mineral agent under Capel Hanbury Leigh, Esq., of Pontypool Iron-Works.

DIED,—At Conside Iron-Works, on the 3d of February, aged 41, Mr. Joseph Hunter, engineer. His death was occasioned by injuries received at the rolling-mill, two days before, while giving directions to the workmen. The deceased was 10 years engineer to Messrs. John Abbott and Co., Gateshead, and had only been at Conside about seven months.

CWM AVON WORKS—TESTIMONY OF RESPECT.—Mr. Allcock, the rail-mill manager, being about leaving these works for the new rolling-mills now erecting at Briton Ferry, a subscription was entered into by the workmen in his employ, for the purpose of presenting him with a token of their friendship and regard. The sum collected amounted to upwards of 20 guineas with which a very handsome gold watch was procured, bearing the following inscription:—"Presented to Mr. Thomas Allcock, manager of the puddling and mill forge, Cwm Avon, by the workmen, as a token of regard.—*Merthyr Guardian.*

COAL MINING.—We have been given to understand that the "Clanny Safety Lamp" has for some time been in use, and successfully, in the following coal-mines—viz; Willington, Walker, Wallsend, Seghill, Gosforth, and Coxlodge, Heaton, Monkwearmouth, Thornley, Wingate, Belmont, Jarrow, South Pegreth, Pelton, Oxclose, Rhymney Iron Company's, Patricroft, Coalbrookdale Company's, Risca, Broadsfield, and the colliery near to Chesterton Hall.—*Gateshead Observer.*

CURIOUS DISCOVERY.—As Wm. Hancock was working in an ironstone pit-head, for Mr. G. Bennett, iron ore miner, in a field belonging to J. G. Barnes, Esq., Ashgate, near Chesterfield, to his great surprise found a mouse in the solid earth, 15 ft. from the surface, without any appearance of decomposition, except being rather lighter in colour than is common. The mouse may be seen at Mr. Hancock's, Storr's-lane, Brampton.—*Derbyshire Courier.*

THE EMPIRE OF STEAM.—Steam brings from the quarries the stones for the high-level bridge. Steam drives the piles for the bridge into the bed of the river. Steam mixes the mortar with which the stones are joined together. Yes! next door to the castle of William the Norman, Messrs. Rush and Lawton, the contractors, have a steam-engine hard at work making mortar for the high-level bridge!—*Gateshead Observer.*

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

A letter from St. Etienne mentions that the miners of Rive de Gier have given a week's notice of their intention to strike, if an advance of 50 centimes per day be not made in their wages. These men are employed in one of the amalgamated coal companies; and, should they carry their threat into execution, will no doubt persuade or menace all the men employed in the numerous mines of the company to strike also. It was foreseen from the first that strikes would be one of the greatest difficulties with which the united companies would have to contend; for such is the enormous extent of their possessions—nearly 20 miles in circumference, and comprising the greater part of the best coal districts in this country—that strikes become matters of public, and indeed of national, concern, instead of being as heretofore mere squabbles between the employers and employed, which they were left to fight out between themselves. The present strike is peculiarly unfortunate for the companies; for, occurring at the present moment, it will afford a strong argument to their adversaries against their monopoly. Even if it be the most unreasonable strike that ever was made, the public will still be sure to denounce it as an inevitable consequence of the union of so many companies into one vast concern. The statement that the men put forward, in defence of their conduct, is, that the advance they demand is absolutely necessary, to enable them to meet the extraordinary dearness of bread. To this the company answers, that they have supplied bread to their men at less than the baker's price; and they complain that the men are acting ungratefully, considering that hospitals have been built, and schools founded, for them and their children. It appears that the boasted reductions are not so considerable as would be supposed from the stress laid upon them—for it appears that, even to men with large families, they amount only to 2d. or 2½d. a day—whilst to single men they are perfectly imperceptible.

Messrs. Seguin, the founders and principal directors of the St. Etienne Railway, are at present undergoing a trial before the Law Courts, at Lyons, on an accusation of swindling. The serious charge is brought forward by a discontented shareholder, under prosecution for libel on the directors of the company; and it is based on the allegation, that Messrs. Seguin made certain profits to be carried to the credit of one description of shares, instead of to another, whereby they obtained no less a sum than 2,000,000 fr. (100,000*l.*) on their own shares, to the prejudice of those held by other persons. As the case excites great interest in our railway and mining worlds, I will give the principal details respecting it when the judgment of the court shall be given.

The monopolists, and their organs, contend that the vast progress that the production of iron, and the manufacture of machines, have made in this country during the last 20 years, affords an unanswerable argument in favour of keeping up their monopoly still longer. Plain people may not be able to see the force of the argument, or even that there is an argument at all; but, without dwelling on that point, I will just remark, that the increased progress has not been sufficient to enable France to get the supplies of iron and machines of which she has need. Here is one proof among a thousand. Your readers are aware that a small embranchment of about a mile or at most a mile and a half long, has been made on the St. Germain Railway, for the trial of the atmospheric system. Well, the company had to wait months and months before it could get the tubes that were required, and I believe that even to this day it has not received all ordered—so much for the "progress" in the fabrication of iron. As regards machines, the company was not much more fortunate—it had to wait months and months for the three sets of machines necessary to draw the air from the tubes; and yet of these three sets, *two* only could be ordered in France. The great machine establishments could not undertake to fabricate more than *two* (?) within the time specified; and so the third had to be ordered in, and supplied by, Belgium!

In this country the Government has a hand in everything: roads, waterworks, mills, manufactories, mines—everything. Without its authority, mills cannot be erected, furnaces cannot be opened, mines cannot be worked; and the permissions that it gives relative thereto are published from time to time in the *Moniteur*. In a recent number of that journal, I find a long list of such permissions, granted in the month of December; and I quote therefrom most of those that concern mines and iron, in order to show you the extraordinary favour which such enterprises enjoy at the present moment:—Permission to the Countess de Chastenay-Lantz, to open a furnace at Essarois (Cote d'Or); to Sherwood and Co., to open a metallurgic establishment at Guines (Pas de Calais); to the same, to enlarge their iron establishment at Marquise-sur-Slack (Pas de Calais); to Mertian, to enlarge the iron establishment at Montataire; to the Loire and Ardèche Iron Company, to put into operation two new furnaces at its establishment at La Voulte (Ardèche); and to different people for opening furnaces, or working iron mines, at Vrigue aux Bois (Ardennes); at Sesane (Ardennes); at Blagny (Ardennes); at Commentry (Allier); at Fouret, Wagnon (Ardennes); at Grande Etang, Wagnon (Ardennes); at Soutin (Ardèche); at Saint Martin de Fressengeas, Saint Jean de Cole, and Milhac (Dordogne); and at Serremyeanne and Lascoupes (Aude).

The *Moniteur* announces that the Turkish Government has caused to be remitted 178,712 fr. to the French Government on account of the French company, known as the Company of the Sulphur Mines of Tripoli, and which, having lost its privilege of working the mines, demanded recompense from the Ottoman Porte. The above amount is one-half of the sum the Turkish Government has undertaken to pay.

MM. Lamarque and Co. have formed a company with a capital of 2,000,000 fr., in 2300 shares, for working the furnaces and steel manufactory at Saint Antoine sur Ariège, in the department of Ariège.

It appears that metallurgic establishments are on the increase in Belgium. Messrs. Riche and Co., of the Sambre and Meuse Railway, have put into operation the furnaces of Tuy le Chateau, and have attached a *lavoir* to their establishment. A new furnace is in construction at Couillet. A second furnace has been opened by the Company of Houpeschambre; and it is reported that it will open several others, as well as resume those already at work.

"The decline," says the weekly letter from St. Dizier. "anticipated for some time, has shown itself on the *fers battus à la houille*, an order from which is having been taken at 385 fr. the 1000 kilogrammes, delivered at St. Dizier. Concessions have also been made on the *fers laminés*, the prices of which vary according to the establishments. A lot of *fonte noire* has been sold at 105 fr., taken at the furnace. *Fonte blanche* is at 195 fr. Sales can only be made at long terms. Most of the establishments of the Marne, and its tributary streams, are underwater, and several furnaces are closed. In wood, holders stick up for established prices; but purchasers, believing a decline inevitable, refuse to give them. A stock of 3,000 metres is on hand. Next year is expected to produce only half the quantity of wood produced this year. Fine lots will not be numerous: those such as now exist in our wharves have been made for Paris."

The Company of the Hauts Fourneaux of Monceaux will hold a general meeting at Monceaux, in Belgium, on 8th March next.

Last week, the Vieille Montagne shares were done on the Bourse at 1000 fr.; the Antonius at 1025 fr.; and the Hauts Fourneaux of Monceaux at 2075 fr. and 2120 fr.—*Paris, Tuesday.*

EXTRAORDINARY WIRE-ROPE.—*(From a Correspondent.)*—As your valuable Journal is one of the greatest mediums of the industrial arts, I beg to communicate an extraordinary production in the art of rope making. To-day, on passing the celebrated Galvanised Iron and Wire-Rope Works of Mr. Andrew Smith, Millwall, Poplar, I witnessed the shipment of wire-rope, which the manager of the works informed me was no less than 9600 yards long, 3 inches circumference, and weighed 7 tons 15 cwts., ordered for an incline plane in Lancashire, between Blackburn and Preston. This is, no doubt, the largest wire-rope ever yet been made; and I am informed, that it was only commenced last Monday, and that the iron was in bars of iron not more than 10 days before. What will Russia say to this, Mr. Editor?

RAILWAY BRIDGE RAILS.—We understand that Mr. Wood, of the British Iron Company's Works, Aberaychan, succeeded in rolling, during last week, bridge rails weighing 90 lbs. per yard, 30 feet long; and finer and more perfect rails, a correspondent asserts, were never seen. This is one of the many instances in which Mr. Wood has proved his great and extensive practical knowledge of the manufacture of rails and chairs as well as the *minutiæ* of the iron manufacture generally—knowledge for which this establishment is celebrated fully testify.

IMPORTATION OF QUICKSILVER.—The most recent arrivals from the Levant included two from Seville, in one day, with cargoes of 2350 packages, consigned to a most eminent firm, one having upwards of 1000 packages, and the other 2350 packages, of this valuable description of merchandize.

Original Correspondence.

MINING IN THE MARIA DISTRICT.

SIR,—In remarking on the letter in your Journal of last week, respecting mining in the Maria district, signed "W. Y.," I would briefly say that it matters little to the adventurers in South Maria, whether the great Maria lode, or any portion of it, be in their sett or not; although the question might perhaps be asked, if it be not there where can it be—or rather, what is become of its riches? The report of the so-called West Wheal Maria states, that at 81 fms. in depth, there are spots of ore occasionally, and that in the cross-cut the ground is rather hard for driving. How different are these facts from those at South Maria? where at the depth of 15 fms., and without the lode having been even seen, the orey ground produces yellow copper ore, nearly saving work, and which, at a very few feet deeper, is expected to be worth returning; the killas is of that beautiful white description of micacious schist, with dark spots, usually, I believe, termed chiastolite, and is considered the most favourable of all mining indications. Where are circumstances similarly favourable to be found in any of the new setts adjacent? Moreover, the backs of many lodes have been traced across the vein from Great Maria, and several seen in the wheel-pit; whilst the valley, in which the mine is situated, gently undulating and sloping towards the hill, seems to offer every condition for a rich mineral deposit; and where the ground is congenial, there alone, I believe, will great wealth be found. "W. Y." arrogantly asserts, that your correspondent is mistaken as to the underlaying of the lodes; but be it remembered that assertion is not proof; and, as to the nine years' working of the adventure, was not Troy of old beseiged for nine long years, and captured in the tenth. After all, it is better to possess most beautifully congenial and metalliferous killas in the shaft, and abundance of ore, even without a lode, almost realising what has been vaunted by the Great Maria, "that they find ore, sink where they will," than to have gone down 30, 40, 50, or even 100 fms., and to be tantalised with hard ground, and occasional spots of ore. I will conclude, by repeating an idea of an old and most successful mining captain of the west country, "that where it is, there it is."

Falmouth, Feb. 22. AN ADVENTURER.

MINING IN THE MARIA DISTRICT.

SIR,—A letter appeared in your Journal of last week, signed "W. Y.," in reply to, and in condemnation of, statements made in two letters of mine, through your Journal of the 6th and 13th inst. "W. Y.," in his said letter, thinks me so far wrong, and professes himself to be such a stickler for the truth, that he takes the infallible position of setting both your readers and myself right on the subject. Hear, hear, I say—and wish I had him always by my side, if this good luck of setting everything right always attends him—but before I make such a bargain with him, I wish to analyse his statements, to ascertain if their component parts are what he call its—viz., truth. He first says, that South Maria is not entitled to the appellation of West Maria, as the Maria lode passes north of South Maria sett. If he will look again, he will find this I acknowledged; and gave, as I still do, Wheal Fostescue and Wheal Williams the benefit of the Maria lode running west, whatever it may be worth. "W. Y." calls this setting your readers right, when he tells them that the Maria riches pass through Wheal Fortescue and West Maria setts, although the Maria running west has no riches for itself—but I do not presume to say that this lode may not again open and improve in passing through the said setts. Far be it from me to attempt to depreciate the value of either West Maria, Fortescue, or any other of the northern setts. I believe, with perseverance, economy, and good management, they may all make good mines; and as they possess parallel lodes with the Maria, they may naturally expect some as rich. The question between "W. Y." and myself, is as to the course of east and west, and the geographical position of South Maria to the Maria sett. May not your readers infer what he means is, that the Maria south underlays run through, or near, West Maria shaft; and this shaft, consequently, about west from the Maria shaft?—at any rate, he says, that "Fortescue and West Maria lie due west from the Maria." But he is very ingenious here; and, according to promise, reveres the truth; for, although he cannot fling the Maria lode up the hill north, to take its west course through West Maria shaft, he does tell the truth, when he says the Maria lode passes through (part of) West Maria sett, but does not explain that it is only through the meadow lying between this point of Wheal Fortescue and the River Tamar. He tells me I am mistaken as to the split and underlay of the two branches of the Maria lode going west; if so, how is it he does not set your readers right in this respect, and prove it otherwise? Of course, professing, as he does, to adhere to the truth, he cannot object to my remarks, and leave me with the truth on my side. Where do I find him, after making his exit from this point! He says, pursuing the course of the Maria lode east, and takes his stand on the summit of the mountain, near the Josiah shaft. Here we are somewhat unanimous, and were we present, should surely shake hands on one point—viz., that the point of the dial here, as he admits west, is through South Maria sett. But what will your readers say to this? Say! surely what "W. Y." calls strange things; for, on quitting the Maria shaft, he stoutly contends that West Maria and Fortescue lay due west from the Maria, and then made a tour on the course of the Maria lode east to the Josiah shaft, touching at the Fanny and Anna Maria by the way. Of course, he having engaged to set everything right, it must be so; but will not your readers expect that the point of the dial, west at the Josiah shaft, would be towards West Maria and Fortescue setts, he having just declared that these two mines are west, and the Fanny Josiah east, of the Maria Mine? Instead of this, like the needle clinging to the magnet, he sticks to the truth, and agrees with me, that the point west here is (on the course the Fanny lode is taking) through South Maria sett. Pray, Sir, request your readers not to notice this discrepancy; he is setting the matter right, and as Nature had it before—therefore, they will excuse him for once; the error might not be his—perhaps, the fault was in the slippery steel-pen refusing its proper work; or he might have written without his spectacles, or the dial might not be on a level. Let him try again—perhaps, the point will be north next, or through West Maria shaft. Being so pleased with his success here, he wings his way further south, and alights on the back of Jack Thomas (lode). Here he annihilates poor South Maria, and declares that, out of the three lodes found south of the Josiah, the Jack Thomas lode (the most south of the three, of course,) is the only one worth working, and runs as far south, as the Maria lode does north, of South Maria sett; so your readers will perceive he has driven all the lodes that Nature gave South Maria beyond the north and south boundaries of that sett, and bequeathed its riches to the neighbouring mines. But, hold, Sir, not all lost yet—there is a case for a jury, and I shall go to court with him, as he certainly has proved my case, and entitles me to a verdict. Now mark, he says, that the Jack Thomas lode runs as far south (or down the stream), as the Maria lode does north (or up the river), of South Maria. In this he has finished my work, and grants me all I ask for—viz., that the river runs north and south, dividing the whole length of South Maria from the Maria sett; and that the rich cut lodes, south of the Maria lode, going west, must pass through South Maria sett; for if, as he says, that the Maria lode runs north of South Maria, and the Jack Thomas lode south of South Maria, both crossing the river, he certainly proves that the Tamar here is north and south; and, consequently, of course, the land each side must be east and west. I said "W. Y." had done my work for me, rather he has completed it—for he has left South Maria sett where I described it to be—viz., direct west from the rich lodes cut in the Maria sett. "W. Y." says, that I strangely passed over the cross-course west of the Fanny shaft; indeed, I think this onus lies with him, to prove what this wonderful cross-course has done; for, with either of us, our remarks can only be in theory, as to know what shift this cross-course has made. Let the Fanny lode be driven down to it, then drive on the cross-course north, up to the Maria shaft—then, and not until then, will the whole truth be known, as the lodes are so many, and in that quarter so near each other. I further add, that if the driving on the cross-course is continued north beyond the Maria, the place of meeting of the two lodes forming the Maria junction will be discovered, and not unlikely prove to be parallel lodes with the Josiah and Fanny; and to continue this driving north on the cross-course, will bring them, I think, very near West Maria shaft. "W. Y.'s" remarks on the cross-course being merely theory—why not I deal in theories, too?—indeed, I think I have, and can, show a case stronger than theory can make it; for, as he says, the point of the dial, west from the Josiah, is through South Maria; and, as near as the eye can judge, in the direction of the five lodes cut in that sett, containing the same strata and promising appearance, as the lodes cut so good in the easterly direction, the other side of the Tamar, on the Maria sett. Add to this the five lodes seen in the bed of the river, at regular distances, and in the same direction—renders mine, I think, more than theory, and demonstrates beyond the power of "W. Y." to contradict, that five lodes run from the Maria into South Maria sett, just in the line of the point west from the Josiah shaft.

I have not said positively that these lodes cut in the Maria are the same; but ask, where are South Maria lodes gone in the Maria sett? They are there somewhere, unless "W. Y." has set bounds to them in the bed of the river. I ask "W. Y." again, where are they gone? Had they been near—as certainly they must—the Josiah and Fanny, surely are this, they would have discovered, as the ground at and near that point has been so explored. Really, Mr. Editor, one might be almost presumptuous enough to say, that two of South Maria lodes are gone up the hill into the Fanny and Josiah shafts, as the Fanny levels at present are coming down the hill west, in the direct line of South Maria north lode; and unless this wonderful cross-course flings it up at an unheard-of distance north up to the Maria, the men, if they continued driving the Fanny end, will surely hole one day in one of the lodes in the low ground of South Maria sett. Having followed "W. Y." in what he calls setting your readers right, I will leave them to judge of the correctness of their guide, and decide between us, waiting for time and labour to prove which is right.

Of course, "W. Y.," being infallible, makes no mistake, though his last assertion is untrue. Your readers will attribute it to exhaustion through nocturnal lucubrations, and that he wrote a little while nodding—for instead of South Maria having been worked for nine years, the first call, under the present company, was made in January, 1845; and it would be as untrue and unfair to say, that West Maria had been worked 12 years, because it was begun 12 years since by another company, as to say that South Maria had worked nine years, because a few shode pits had been made there nine years since, and then shipped. I now leave your readers to go, see, and judge for themselves; for, having written three long letters in support of that which appears to me to be the truth, I cannot find time to say more on the subject; and, if "W. Y." has not set them right, which I dispute, they had better keep him writing until they are satisfied.

Tavistock, Feb. 25. A FRIEND TO MINING OPERATIONS.

MERIONETHSHIRE SLATE COMPANY.

SIR,—My attention has been drawn to a paragraph in your paper of the 20th inst., on the Pantdrainiog Quarry Slate Company; and as a comparison has been made between it and the quarries of the Merionethshire Slate and Slate Slab Company, I think it only fair that the matter should be put upon a proper footing. I know the Pantdrainiog Quarry, and have no wish, in any way, to depreciate its value; comparisons are generally invidious, and by no means certain as to accuracy of the result. You say—"In another part of our paper will be seen an advertisement from the Merionethshire Slate Company, in which it is stated that the profits, since the commencement of working, in October last, will enable the company to pay 5 per cent. on the calls." You also say, as the ground of your comparison, "that in the Pantdrainiog Quarry there was as large a quantity as 80,000 tons of marketable slate uncovered, and that it only required the necessary capital to be expended to render this valuable property a source of great profit to those who embark in it." You also say it has "its plant" in complete readiness to commence working immediately, and in less than a fortnight they may have slates in the market. There are now three cargoes on their way to London from the quarries of the Merionethshire Company. You also allude to a steam-engine.

Now, in order to arrive at a fair judgment, you ought to know how much slate is uncovered in the quarries of the Merionethshire Company—you ought to give its fair weight to the fact that, on their present limited scale of working, which will, as soon as the necessary preparations are completed, be greatly extended; they are producing a profit of more than 3000*l.* per annum—you ought also to know whether a steam-engine is necessary at the quarries of the Merionethshire Company, which is not the case, as all the material is obtained by level, and not by lifting power, and the manufacturing machinery is all worked by water. These are a few of the points to be ascertained before a fair comparison can be made, and a just conclusion drawn. I have now only to say, that the Merionethshire Company has been formed chiefly for the purpose of supplying *slate slab* in large quantities at reduced prices—while Pantdrainiog Quarry produces roofing slate, which I know to be excellent of its kind. The Merionethshire Company has no fear of any rival in the market, either as to quantity or quality; and as the demand is 20 times greater than the supply, we do not grudge the success of any company, so long as it is not obtained by comparisons unfairly instituted with that in which I am a shareholder.—A SHAREHOLDER IN THE MERIONETHSHIRE SLATE SLAB COMPANY: *Feb.* 25.

TRESAVEAN MINE.

SIR,—The adventurers in Tresavean Mine, who reside in this town, were not a little surprised to find an article in the *Mining Journal*, of the 18th inst., to the following effect:—"TRESAVEAN MINE.—The ore in the deep adit level, which was worth 50*l.* per fm., is cut out."—I am not aware that such a lode existed in the deep adit level; but in the 286 fm. level, the lode continues 2 ft. wide, and is worth from 50*l.* to 60*l.* per fm. I beg therefore to state, that your information received respecting this mine is wholly incorrect.—ONE OF THE COMMITTEE AT TRESAVEAN: *Falmouth, Feb.* 20.

[We readily insert the letter of our correspondent, and regret that any information conveyed through our columns should have been calculated to mislead. We are at all times desirous of acquiring information as to the prospects of mines, so that such may be conveyed through the medium of the *Mining Journal* to out-adventurers; while we invariably observe the practice of placing the notes we may receive, under the head "From Correspondents," thus relieving the agents and ourselves from any responsibility attaching to the report.—If that the committee would furnish us from time to time with reports, and copy of accounts, for which we are indebted to out-adventurers, we would take good care that they were duly inserted.

WHEAL ELIZABETH MINING COMPANY.

SIR,—You will oblige me, as a shareholder in Wheal Elizabeth Copper Mine, Tavistock, of which Mr. J. Edgecombe is the reported purser (but who the manager may be I know not), by calling the attention of the adventurers to the necessity of a meeting being held to investigate the accounts, and to ascertain the real reason of the mine not being worked. The pretended statement that the "calls" are not paid is very unsatisfactory to those shareholders who have long since paid their calls.—A MOST DISSATISFIED SHAREHOLDER: *Bristol, Feb.* 22.

WHEAL CURTIS MINING COMPANY.

SIR,—On reading the report of this mine, dated 27th Jan., it occurred to me that Captain Crase might have found matter enough concerning the mine to write about, rather than employ his time in animadversions on the old manager. It is well known, that Capt. Teague meant to make Wheal Curtis a great mine; and had he lived, doubtless, would have done so with the engine-shaft he sunk; and from that engine have drawn flat rods if necessary, to any part of the sett; but, by his error, Capt. Crase benefits, inasmuch as he can draw flats to Capt. Teague's workings—by the same rule, flats could be drawn from Teague's engine to the present engine-shaft; and Cornish miners deny *in toto* the assertion, that Capt. Teague made any error in fixing his engine where he did. There are other parts of Capt. Crase's report I might comment upon, and should do so, were my remarks not likely to cause the miners of Cornwall to look upon Capt. Crase as "a living *dog* worrying a dead *lion*."

Helston, Feb. 20. A. CONSTANT READER.

WHEAL ADAMS MINING COMPANY.

SIR,—Having read the letter of "A Looker On" in the *Railway Herald* of the 13th inst., and also of "A. B.," in that paper of the 20th inst., reflecting on the conduct of the directors and secretary of Wheal Adams Mine, and being of opinion that such letters emanate from private personal malice, more than from any desire to correct an abuse in mining, I think it right, being interested in mining, that the mining interest and the public should have the simple facts put before them, that they may fairly judge for themselves, as partial and unfair statements serve only to mislead. Now, it appears, upon inquiry, that, in the lattter part of the year 1845, the manager of Wheal Adams was taken ill, and very heavy and unexpected demands upon the mine for machinery, &c., were laid before the directors; and those demands were so emergent, that there was no time for making and collecting a call to meet them, when Mr. W. C., one of the directors, kindly offered to advance the mine 2000*l.*, which offer was accepted by the directors, and afterwards sanctioned by the shareholders at a general meeting in March, 1846—since which no money has been borrowed; but, on the contrary, calls have been made, and about 1250*l.* of the 2000*l.* paid off. Some few months since, discoveries were made, which greatly enhanced the value of the mine—consequently, certain parties were desirous of purchasing shares, and several mining brokers made application to the directors and secretary of the mine, who hold nearly three-fourths of the shares—and what was the result? Why, only one amongst them (Mr. C. C.) could be induced to sell; and that gentleman sold some six or seven shares, still reserving 34 shares—being about one-fifth of the mine. I purchased four shares of him, and endeavoured without success to induce him to sell three more. Since then, two calls of 5*l.* per share have been made—one in December, 1846, and the other on the 4th inst.—to pay off the debts, and to provide for the future working of the mine. The accounts have always been open for the inspection of shareholders; and any shareholder, or party, about to become a shareholder, could have received from the secretary in London any information as to the state of the accounts and the mine. I now, Mr. Editor, ask you, if, under such circumstances, "A Looker On," who has no interest in the mine I believe, was justified, or was serving or benefitting mining, by anonymously endeavouring to injure the characters of several of the wealthiest and most honourable supporters of our mining market. I shall feel obliged by your inserting this in your Journal of to-morrow, and hope in future to see the columns of mining papers filled with valuable information, and not personal slander.—T. P. THOMAS: 18, *Threadneedle-street, City, Feb.* 26.

[The explanation afforded by the above letter certainly sets the matter in a different light than what we had previously been given to understand. We personally know the parties referred to, and would hope that no such motives as have been inferred could actuate the accused party: we, therefore, conclude that the whole has arisen from some impure or interested channel, sincerely trusting that the gentleman attacked is too honourable to act as represented.

WEALTH OF THE RIVER AMAZON, SOUTH AMERICA.—We some time since noticed the fact, that a celebrated English nautical and mining engineer had been exploring the country up the Amazon, and made some valuable discoveries as to the existence of extensive deposits of the precious metals, auriferous sand in the streams, and many botanical specimens quite unknown in this country. A company was formed in the United States to endeavour to reap the advantages of these discoveries; and the French sent out an expedition two or three years since, which has, however, turned out unsuccessful, as another is now forming to go out in the *Astrolabe* corvette, and *Alecton* steamer, of 80-horse power. The Academy of Science, under the direction of M. Arago, have given all the necessary instruction to the officers; and these vessels will leave early in the spring for the Brazils. From the discoveries which have been made, it is presumed that a communication exists between the Amazon and the Pacific—or, at least, a very slight interruption. The result is looked forward to with great interest by scientific men, as there appears to be no doubt entertained of the existence of large quantities of mineral wealth. The Anglo-American Company are already prosecuting their researches, and have several narrow boats drawing but little water, some of which are worked by steam, far up the river. From these exertions, it is not too much to expect, that we shall soon be in possession of some most interesting information of the mineral and other natural resources, the inhabitants, zoology, botany, &c., of this interesting, but little known, portion of the globe.

SILVER AND GOLD MINES OF THE NEW WORLD.—No. V.

This ingenious system adapts itself without effort to undefined masses. For laboratory, it exacts nothing more than a flagged area, where the heaps of ore reduced into paste are spread out, and where the mules come in bands to tread it.

Once in possession of the process of Medina, the Spaniards erected immense establishments, where they worked as much as 15,000,000 kil. of ore. The ideas of this people have often a stamp of greatness. They conceive on a large scale, and there was a time when they had the strength to execute what they conceived. The works of some of these mines were on a gigantic—an extreme scale. The principal shaft of Valenciana has a perpendicular depth of 627 metres 67, and a diameter of 8 metres 48. There are shafts of a width of 10 metres, and even of 12.* This extraordinary, and, as to width, extravagant dimensions, will give an idea of the audacity and the power with which the ore is attacked. Let us examine how it is treated. In most ores, silver is in the state of simple sulphur (black silver), or of composed sulphur (antimonated sulphurous silver, which is red);† then there is native silver; and lastly, but rarely, chlorure or bromure of silver.‡ It is on this general law of the composition of the ore that the efficacy of the process is founded. The object that Medina proposed to himself was to make the silver contained in the ore, in these diverse combinations, pass to the state of amalgam—that is, of union with the mercury. Mercury possesses itself *à froid* of the bodies of which it is used, and there is none for which it has more affinity than silver. Now an operation *à froid* dispensed with the necessity for fuel, which the country did not possess; besides, the amalgamation gave the means to concentrate in a small volume the silver scattered through an immense quantity of *gangue*, without having recourse to the process of washing, for which water could not have been obtained, and which had besides, as already explained, other drawbacks. The silver once united in an amalgam, nothing was so simple as to separate it from mercury—a little fire sufficed. The amalgamation, therefore, removed all difficulties, and was the final object of the operation.

The affinity of mercury for the precious metals had been remarked in ancient times—at least, as regards gold; but the Greeks and Romans never employed it in working mines. It was one of the reasons for which alchemists employed mercury with predilection, and supposed it possessed of almost unbounded power. The employment of mercury had been commenced to perfectionise the extraction of gold from the alluvions of Saint Domingo two or three years after Christopher Columbus disembarked in that island. It is even proved, after the Arab geographer Edrisi, that the employment of mercury was common from the 12th century in the gold washings of the interior of Africa; but, before Medina, metallurgy had made no use of the power which mercury possesses towards silver. The action of mercury had been put to profit with respect to gold, deprived of all combination with the bodies which denaturalise the precious metals, such as sulphur, chlorine, antimony, and render them impossible to be attacked by mercury itself. In the alluvions of Hayti, and the interior of Africa, as in all auriferous alluvions, gold is in the metallic state. In the Mexican ores, other than the *colorados*, on the contrary, silver, instead of being in its simple condition of a free metal, mixed in a mechanical manner only with earthy matters, is engaged in combinations, which entirely paralyse the affinity that it has for mercury. The problem was, therefore, new and complicated.

The ore is first piled in the *bocard*,§ then reduced in powder in the *arrastres*—circular basins where the ore coming from the *bocard* is put into a liquid state, and crushed by two or four blocks of hard stone, called *voladoras*.‖ In this state, the ore separated by deposit from the excess of water, and thus made a sort of paste, is extended in immense flat cakes (*tortas*), from 12 to 15 metres in diameter, and of a thickness of from 20 to 25 centimetres, on the paved area of a court (*patio*). A *torta* contains, according to the localities, from 50,000 to 70,000 kilogrammes. Salt is put therein, and a *repaso* is given—that is, horses and mules are made to turn at a gallop during several hours, the number of animals being from 8 to 15, according to the dimensions of the *torta*, then *magistral* and mercury are put in, and then takes place a new *repaso*. During an interval, which, according to the nature of the ore and the season, varies from 15 to 30 days, and goes even to two months, and sometimes to three, the mass is left to work itself, but not without the aid of *repasos*. By little washings in a wooden bowl, the moment at which all the mercury is converted into a solid amalgam is ascertained, or, to speak more correctly, when the mercury ceases to flow, for it is a soft mass. At this moment a fresh quantity of mercury is poured on, which, after a new delay of 12 days, transforms itself into a mass. When, on adding a new dose of mercury, it, instead of coagulating, rests fluid: it is proved that all the silver, capable of amalgamating, has been absorbed by the mercury. Then the operation is terminated. The paste is washed from the *torta* into a vat of wood or stone (*lavadero*), where it is shaken with a turning rack, put in motion by mules. Additional washings complete the separation of the amalgam from the earthy matters, and it suffices to heat the amalgam under a bronze bell, to cause the silver to remain alone.

Three hundred years after this empirical process had succeeded, chemical science, so glorious and so proud, and which has reason to be so, discovered the secret. Combined with sulphur, and still more with antimony and sulphur together, silver was, as has been seen, not to be attacked by mercury; salt and *magistral* serve to free it from these combinations, and to cause it to pass to the state of chlorure, which, in the presence of mercury, with which the *torta* had been scattered, cedes its chlorine to a part of the mercury—so that the silver become free, can combine itself with another part of the same metal. On the contact of salt, the sulphate of copper, which is the active element of *magistral* (chlorure of sodium), changes itself into bichlorure of copper; the action of bichlorure of copper on sulphurous silver, gives birth to a chlorure of silver. The water, charged with the salt with which the *torta* is impregnated, has the faculty to dissolve this, which would be perfectly indissoluble in pure water, and, once dissolved, it is decomposed by the mercury. The *repasos*, or pressings under the feet of mules, are indispensable, not only for this general cause, that motion and agitation facilitate all chemical action, but also by this particular motive: the bichlorure of copper has no energetic action on sulphured silver—it is only at the surface that it transforms it in chlorure of silver, seizeable and decomposable by mercury. It is then absolutely necessary to renew the surfaces, and that is accomplished by the treading of men and beasts.

In this operation there is always lost a certain quantity of mercury—not of that which is passed to the state of amalgam, for the amalgam restores all its mercury,¶ but the chemical action of *magistral*, and of salt, makes a portion of mercury pass directly to the state of chlorure, and, perhaps, other combinations which remain in the mud, and that cannot be withdrawn. Hence an accidental and invisible loss, useless to the success of the operation, but yet inevitable. Another loss, but necessary, determined, fixed, and which may be calculated, arises from silver once chlorurated, ceding its chlorine to mercury. This absorption of mercury is almost exactly equal in weight to the silver which would be found in a state of chlorure.** Lastly, a small part of mercury goes mechanically in the washing to the state of amalgam, or to the free state. It is estimated, that the proportion of mercury which disappears is from 3000 to 4000ths of the weight of the ore submitted to the amalgamation. It is about 1½ times the weight of the silver extracted from it. Of all the expenses of the operation this is the most apparent, and the most sensible to Mexican miners. This method of amalgamation succeeds well, we say, with ores which enclose silver in the state of sulphur, better still with those where it exists in the native state—for then the mercury takes hold directly of the silver, without having itself to disappear in the mud at the state of chlorure much divided, or in dissolution, that there would be no means to refind. The ores which contain silver in the state of complex sulphur, in combination with antimony or with arsenic, render with more difficulty by this process the totality of silver they contain—those where the silver is disseminated in sulphurs of lead or zinc are also rebellious: the bromure of silver which exists at Catorce absolutely resists.

The method of the amalgamation is applied to the greater part of the ores of Mexico, and of the whole of America. It is calculated that $\frac{2}{3}$ds of the silver of Mexico are thus obtained. The rest, forming about the fifth of the total, is extracted from the richest ores that are separated from the mass during the breakage with the hand. It is obtained either by ordinary fusion in a furnace with litharge or potash,†† or by the amalgamation *à chaud*.‡‡ A little silver is also obtained directly from the ore, by placing in the *arrastres* mercury, which obtains possession of the native silver, as it is exposed, by trituration.

Without the invention of Medina, the mines of Mexico, and those of the New World, altogether would have remained almost sterile. Still this modest man has no statue, not the least monument erected to his memory, not a grave stone, not even an inscription. But, on the entire continent of Spanish America, Columbus and Cortez themselves were equally neglected.

[*To be continued in next week's Mining Journal.*]

MINING IN SOUTH AUSTRALIA.

We learn, by the last arrivals from the colony, that a bill "for regulating and securing the collection of her Majesty's royalties and dues in respect of metals and metallic ores," was moved in the Legislative Council on the 30th of September. Mr. Morphett immediately rose to express his decided opposition to the principle of the bill. The Colonial Secretary interrupted him, on the ground that it was out of order to oppose a first reading. The Governor looked upon Mr. Morphett's proceeding as "an inconvenient precedent:" it belonged to him to point out what was to be discussed. Mr. Morphett stated, that, considering the principle of the bill contrary to Acts of Parliament, he would endeavour to prevent its being proceeded with. The Governor decided that the hon. Member was out of order; and the bill was read a first time. On the 2d of October the Advocate-General moved the second reading of the bill. Mr. Morphett opposed the motion. Any rights her Majesty might have possessed in minerals ceased under the Act of Parliament which conveyed all minerals with the land. The Act founding the colony, established a uniform system of selling land, without reservation of minerals; and the fifth clause provided for the conveyance of land in fee with all the timber and minerals. The taking away of 7 per cent. would cause many mines to stop working. Mr. Morphett moved, that the bill be read a second time that day six months. The other three non-official Members of the Council spoke in succession against the measure. The Governor, Advocate-General, Colonial Secretary, and the Registrar-General, defended it. The Council divided on the amendment, when there appeared—for it, Messrs. Morphett, O'Halloran, Bagot, Devenport (non-official Members); against, Messrs. Mundy, Smille, Sturt (official). The Governor then gave his deliberative and also his casting vote against the amendment, and declared it lost. Immediately afterwards the non-official Members rose in a body, and walked out of the Council-room, leaving the Governor without a quorum. His Excellency, after consulting the Crown officers, declared the Council adjourned till the 6th of October.

On the 23d of September, the local directors of the South Australian Mining Company, attended by their legal adviser and a notary public, proceeded to the Registry Office, to protest against the imposition of royalties, and the conditions of the land grant then tendered for the special survey of 20,000 acres at the Reedy Creek. The protest, under which the grant was accepted in name of the company, proceeds on the general ground of the illegality of the reservation of royalties, and also on the following special circumstances in the company's case. The Waste Lands Act declares that all waste lands of the Crown in the Australian colonies shall be conveyed according to a certain form of land grant. In this form the expression is used "all that is above, and all that is beneath the surface." The payment of 20,000*l.* for the special survey abovenamed was made in England on the 11th of July, 1845. The official certificates of payment were lodged in the Colonial Secretary's office, at Adelaide, on the 3d of March, 1846. The minute of the Lieut.-Governor, imposing a mineral reserve, or royalty, was published for the first time in the *South Australian Gazette* of the 5th day of the same month of March. It was, therefore, grossly unjust to subject the purchasers to terms imposed *after* their purchase was completed. The Royalties Bill consists of five clauses. The first declares that a seignorage of one-fifth of all metals shall be reserved in any grants of lands made since the 3d of March, 1846. The second declares the terms on which the seignorage may be commuted. The third makes provision for the residence of a Government inspector wherever mines are opened. The fourth enacts that the appointment of such inspector shall be notified in the Government *Gazette*. The fifth imposes a penalty upon the removal of ores from the mouth of the mine without giving notice to the inspector.

We quote the following remarks on this subject from the *Daily News*:—"With regret, not unmixed with alarm, we direct attention to the intelligence from South Australia, in another column. That colony, so long the butt of flippant or malignant misrepresentation, was, up to the beginning of last October, the seat of undoubted prosperity. Its young mining industry was being rapidly developed—its wool exports were steadily increasing—a wider home market was opening for its agricultural produce—and still there remained a large surplus for export to the neighbouring colonies. Withal, there were no symptoms of unhealthy excitement—of any tendency to rash speculation. Labourers were well employed, and well paid, and unprecedented vigour was displayed in the local inventions to economise field-labour in agricultural operations. This pleasant state of affairs—this prospect of an asylum for unemployed labourers and capitalists, unable to find adequate investments in England—has been endangered. The disturbing element of fierce political contest has been introduced to unsettle men's attention to regular industry; and, what is worse, it has been introduced by a high-handed attempt to force a measure of questionable expediency itself, and extremely unpalatable to the colonists, through the Legislative Council. The Act of Parliament under which the colony of South Australia was founded, the Land Sales Act, common to all the Australian colonies, and the original land grants of South Australia, contemplated that grants of waste land in that colony should carry with them 'all that is above, and all that is beneath, the surface.' On the 3rd March last, regulations were prepared by the Governor in Council (gazetted on the 5th of the same month), declaring that a royalty of one-fifteenth of all metals, or metallic minerals, should be reserved in all future grants. A reserve to this amount, it is declared by experienced settlers, will have the effect of stopping the working of many mines. However this may be, it is certain that it will have the effect of materially checking the development of mining industry. In South Australia, all land is sold at an upset price of 1*l.* per acre. This 1*l.* does not represent the value of the land; there is more land in that colony than can be raised by the present inhabitants; and, consequently, land has no value in exchange any more than air or water. The 1*l.* is exacted; in the first place, to check the acquisition of large tracts of waste lands by individuals with a view to leave them waste till they acquire a value from land becoming more scarce; in the second place, to preclude the jobbery, favouritism, and political corruption always attendant on a system of gratuitous land grants; in the third place, to render it necessary for those who reach the colonies penniless to work for wages a year or two, in order to earn the means of purchasing land; and, lastly, to provide a fund for affording free passages to labouring emigrants. If the sum of 1*l.* per acre is exclusive fertility or mineral wealth ought not to affect the price; the superiority of one lot over another is the just reward of the skill and enterprise shown in its selection, and a stimulus to ingenuity and industry. Even though the upset price of lands should be thought too low, the alteration ought to be in the price—the system of reserving quit-rents or any analogous payments having proved uniformly detrimental. A measure inexpedient in itself, and contrary to the fundamental laws of the colony, the Royalties Bill ought never to have been introduced. And even had it been the most politic measure in the world, it ought never to have been pressed as Governor Robe pressed it. On the second reading, four non-official Members voted for, and three official Members against, the bill. The Governor cast the decision, by giving both a deliberative and casting vote in its favour. The consequence has been, that the non-official Members in a body left the Council-room in disgust, with the loudly-expressed sympathy of all the colonists who were witnesses of the scene. We do trust that the home Government will instruct their local representative to desist from the impolitic measure, or show more respect in future for the rights and immunities of those over whom he is placed in temporary authority."

Intelligence, of a later date, however, enables us to communicate the agreeable intelligence, that Lieutenant-Governor Robe has, with true magnanimity and judgment, deferred to the unanimous opinion of the colonists, and withdrawn the ill-omened Royalties Bill. The *South Australian Gazette* of the 10th Oct., states:—"The question of the royalties, so far as it can be decided within the colony, is now settled. They are not to be imposed. The Governor, with a manliness which does him credit, after performing all that the most exacting. Colonial Minister could expect, to carry out his views, abandoned the measure when he discovered that the resistance to it on the part of the non-official Members of the Council and of the colonists was determined and inflexible." We sincerely hope that the Home authorities may acquiesce in this wise decision of the Governor. The bill went to confer upon the Crown a right to take 1-15th of all ores brought to the pit mouth in the colony. The owners or workers of the mines might obtain leave to pay money in lieu of this exaction in kind; but the bill makes provision for locating a surveyor within a short distance of every mine. Its object was to have the mines of South Australia worked under an excise. This, as we formerly observed, is a direct violation of the fundamental laws of the colony, which established the absolute right of property in grantees of land to everything above or below the surface; and it was an innovation calculated to exercise a prejudicial influence on the progress of the settlement, as even the young experience of Australia may show. In New South Wales the right to minerals was reserved, and the consequence has been that the valuable coal deposits of that colony are turned to very little account. In South Australia, hitherto, minerals have not been reserved, and that infant colony has already a respectable mining industry.

From the *South Australian Gazette*, of the 17th Oct., we learn that the republicanists of the Government offices are shocked at the discourtesy and irregularity of the procedure, by which the non-official Members of Council achieved the defeat of the Royalties Bill. There was nothing illegal in that procedure, and the importance and urgency of the case warranted their straining courtesy a little. But those complaints of the officials suggest a more important consideration than even the freedom of mining enterprise. New Zealand, with from 8000 to 10,000 colonists, has an elective Legislature—why should South Australia, with more than double the number, not have an elective Legislature also? The proceedings on the Royalties Bill show that the admission of a non-official majority into the Legislative Council is a mere mockery. If these Members are simple or supple, they only serve to enable the Government to act despotically, without appearing to do so. If they are honest and sturdy, they have no power to interpose legal constitutional obstacles to despotism, but merely a *status* which enables them to countenance popular resistance to authority. Non-official Members in a non-elective Council are of necessity forced to become either agitators or nobodies.

BURRA BURRA.—A letter from a correspondent represents the produce of this mine to be as enormous as ever; in October they had 4000 tons at grass and 10,000 in view, and in one month raised 1100 tons of fine ore for shipment.

KAPUNDA.—A 35-horse engine complete, is now being shipped—so that, in another 12 months, large quantities of ore will be raised from this mine.

A powerful smelting company is being organised; and an iron railway, of horse power, will be very shortly constructed from the port to the Burra Burra Company; but other mines, and the Princess Royal especially, are expected to rival, at least, the greatness of the great mine.—*Adelaide Observer.*

On Sunday last, the colonists were taken by surprise at an arrival generally unexpected—that of the ship *Pauline*, 500 tons, Stelljer master, from Bremen, the consignment of H. C. Stakemann, Esq., the Bremen consul. In the cabin were six passengers, and in the steerage 205 men, women, and children. Mr. Dixon's able report from the Burra Burra Mine had been translated into the German language, and extensively circulated on the continent; and the effect had been to induce considerable numbers of miners and others of the labouring population, to determine on emigration to this colony. The ship *Patel*, full of emigrants, was to sail from Bremen three days after the *Pauline*, and a number of persons had already engaged passages on board the ship *George Washington*, destined to follow close upon the others. Indeed, the excitement in favour of South Australia is said to be as strong in Germany as in England, and Captain Stelljer predicts that, during the coming season, the tide of emigration to the United States will be turned towards this country.—*S.A. Register.*

We learn with much pleasure that some of our merchants and leading colonists are about to move at length in furtherance of the all-important design of steam communication with Britain.—*South Australian Register.*

IMPORTANT FROM WESTERN AUSTRALIA.—Three official announcements of the most interesting kind have followed each other in quick succession in Western Australia—the declaration of the ports of the colony as free to all nations, the resuscitation, or more complete and satisfactory examination, of a magnificent and secure harbour for ships of the largest size, within 15 miles of Fremantle; and the discovery of coal within a short distance of the navigable River Murray, and only 25 miles from the new harbour, now called Port Gladstone.

We regret to record the melancholy fate which befel the *Brechin Castle*, by which the foregoing news was received—this fine vessel, having on board the Australian mail, and 500 tons of copper ore from Burra Burra Mines, valued at 12,000*l.*, was wrecked near the Mumbles on Saturday night last, the 18th, and not a soul saved to relate the dreadful disaster. The *Brechin Castle* was commanded by Mr. J. R. Baxter, with a crew of 15 hands: the last place she was known to touch at was the Cape of Good Hope, from whence she sailed on the 23rd December, and had arrived within 15 miles of her destination when the deplorable event occurred. The names of the crew and passengers drowned are:—Mr. J. R. Baxter, commander; Mr. Nichols, first mate; Mr. J. Adamson, second mate; R. Robertson, ship's carpenter; D. Lotteas, steward; J. Payne, W. Mill, A. Nelson, S. Mars, J. Gow, D. Missis, D. Fullis, D. Bell, J. Jack, and J. Scott, seamen. Passengers names—Mr. and Mrs. Winterbottom and child; Mr. and Mrs. Fairburn and child; four others, names not known. The ship and cargo is valued at upwards of 20,000*l.*, and is reported to be fully insured.

[*To be concluded in next week's Mining Journal.*]

IMPROVEMENTS IN THE MANUFACTURE OF IRON.

[Specification of patent granted to Mr. Thomas Payne, of Wandsworth, near Birmingham, for improvements in the manufacture of rolls, for rolling iron and other metals; patent dated August 4, 1846. Enrolled February 4, 1847.]—*Patent Journal.*

This invention relates to improvements in the mode of rolling iron and other metals. In constructing rolls for such purposes, it has heretofore been usual to cast rolls with necks, or axles at their ends, such necks or axles being liable to be broken when in use; and it has also been attempted to cast rolls on the bars of iron, such rolls of iron being intended to strengthen the axles or necks of the rolls; but in all such cases the inventor states that bars of iron so used are much injured, being weakened, and unfit for such purposes; but in order that the important peculiarities of his invention may be more fully understood, he has given (which he believes to be) the present mode of manufacturing the rolls aforesaid, that is to say—in carrying his invention into effect, the inventor states, that in casting rollers, of any given size required, it will be necessary to leave the interior of any such roller hollow, so as to admit of the shaft or axle being passed through, and fixed therein by keys or otherwise; care being taken in casting, that the hollow space within a roller is cast or formed truly, so that the shaft when introduced shall fit accurately, allowing spaces for driving in wedges or keys at the end of the roll, which keys should be securely retained from moving by shrinking wrought iron collars on the shaft or axles; the wrought journals are turned in the wrought-iron shafts, after keying on the rolls, and the surfaces of the rolls turned; by which means of manufacturing rolls for rolling iron and other metals the inventor is enabled to obtain them with stronger necks or axles. The wrought-iron shafts or axles is passed through hollow rolls, which the inventor prefers to be cylindrical openings in the cast iron rollers, but the inventor does not confine himself thereunto, as other shapes may be used; but he claims the manufacture of hollow cast rolls for rolling iron and other metals, and fixing thereunto wrought-iron shafts or axles as hereinbefore described.

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* At New York a good house has a façade of 25 English feet, or 7 metres 60 cents.

† Ores thus rich in sulphur of silver, simple or multiplied, are called, in the language of the Mexican miner, *negros* (blacks), not so much because sulphur of silver in fact shows this colour, as on account of the sulphurs of lead and zinc, with which the rock is mixed, and which dominate as colouring substances. In their parts nearest the surface, to a depth sometimes considerable, the veins have suffered the action of the oxygen of the atmosphere, which acts upon the sulphurs; it results, that other metals than silver present themselves generally in the oxide state; as to silver, its combination with oxygen being less stable, it passes to the metallic state. The ochry, or red tint of the oxide of iron, which arises from the decomposition of the sulphur of this metal, with which the mass of ore is always more or less mixed, strongly colours the rock, and the ores take the name of *colorados*. In the colorados a part, at least, of the silver is in the state of native silver, which renders the treatment easier. In Mexico, the *negro* ores form seven-eighths of those that are treated. In Peru the *colorados*, which there bear the name of *pacos*, represent a proportion much stronger than in Mexico. At Catorce, however (Mexico), all the ore that is worked is in the state of *colorado*. This mine has, nevertheless, 509 metres in depth. Nowhere else have *colorados* been found at such a depth; the mines of Peru are generally not so deep as those of Mexico. It is well to remark, that at Catorce there is but little native silver. The silver is there principally in the state of chlorure (grey silver).

‡ Recently M. Berthier has recognised silver in the state of bromure in the ore of Catorce, and in some others. The bromure of silver is also one of the ores of Chili, as will be seen hereafter.

§ The *bocard* is formed of several pestles, of wood placed vertically one by the side of the other, and terminated at their under extremity by a mass of iron. A horizontal beam, in wood, furnished with long projections or *cornes*, which is sometimes moved by an hydraulic wheel, or more frequently by mules, raises successively these pestles placed one by the side of the other, and makes them beat the bottom of a trough, where the ore to be pulverised is placed, after having been broken by the hand into fragments of the size of a nut.

‖ In the centre of the trough rises a vertical beam in wood, having two traverses across. One of these traverses exceeds the bounds of the trough, to enable two mules to be attached, which cause the beam and the *voladoras* to turn.

¶ In placing the primitive amalgam in straining bags, of which the lower part is in copper, and the bottom in sail cloth, drawn very tight, mercury will dribble through, and there remains a solid amalgam, yet containing still four or five parts of mercury against one of silver. This amalgam is moulded in fractions of disque, that are disposed in manner to form a column on a support in iron. The whole is covered with a bell in bronze, which is surrounded with coal. The mercury, put in steam by the fire, condenses itself by degrees in a reservoir filled with water, incessantly renewed, which is beneath the support of the column. The loss of mercury, that takes place during this distillation, is insignificant, less than a thousandth.

** It is possible, also, and an able chemist, M. Boussingault, has indicated it, that it produces sulphur of mercury.

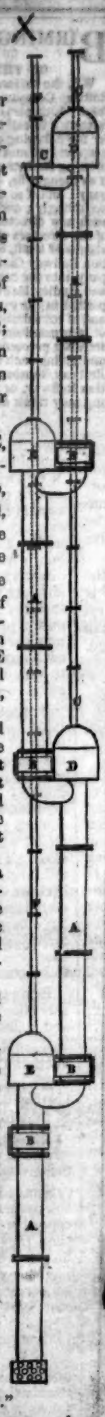
†† At the commencement of the century the process of fusion was commonly employed. M. de Humboldt then calculated that it was applied to 22 per 100 of the total weight of ore. In 1777 it was estimated that two-fifths, or 40 per cent., passed by melting. Without any doubt, the diminution of the forests has contributed to extend the process of amalgamation.

‡‡ The amalgamation *à Chaud*, or working *au cuve*, is employed almost exclusively for ores of the *colorados* species. It is more used in Southern America than in Mexico, without doubt on account of the particular nature of the ores. In Mexico it produces about a tenth of the silver supplied by the country. It consists in working the ore in a copper with mercury. It exacts a degree of richness superior to that of the ore which passes in the *patio*. It is the only manner known to heat such ore as that of Catorce, in which the silver is in the state of bromure in a great part. The patio would have no effect, and, by the process of fusion, a great part would be volatilised.

Original Correspondence.

RAISING WATER FROM MINES BY ATMOSPHERIC PRESSURE.

Sir,—Allow me to call the attention of the readers of your valuable Journal to the annexed sketch, and following explanation, of a system for raising water from mines, &c., by atmospheric pressure, which possesses many advantages in point of economy and general applicability over the system at present in use. A, A, A, A, are a series of pipes leading from the well to the surface, or adit; at B, B, B, B, are valves opening upwards; D, D, are two vessels connected at the bottom of each, with the column of pipes A, and at the top of each, with the small pipe G, G; E, E, are two similar vessels, also connected with the column A, and with the pipe F, F; the two pipes F and G are to be so arranged in connection with a sliding valve (or other suitable apparatus), that when the one is open to the pressure of the atmosphere, the other shall be in communication with the air-pump.



To explain the action of this arrangement, suppose E, E, and the pipe A, A, below them to be full of water; let a communication be made between the pipe G and the air-pump, and the pipe F and the atmosphere; a vacuum will be formed, and the water from E, E, will be forced into D, D; let F be now opened to the air-pump, and G to the atmosphere; the water in the upper D will pass out at the branch C (where there must be a valve, opening outward, by the pressure of the water above it, but closing with the pressure of the atmosphere, when G is open to the air-pump), and the water from the lower D will pass into the upper E, whilst the lower E will be filled from the well; by thus causing the pipes F and G to be alternately opened to the air-pump and atmosphere, the water will be raised.

The distance from one vessel to the next must not exceed the length of the column of water the atmosphere is capable of supporting; and this, of course, depending upon the amount of exhaustion the air-pump is capable of effecting, unless it should be deemed desirable to employ condensed air, instead of the simple pressure of the atmosphere, in which case the distance between the vessel must be regulated by the amount of pressure intended to be used.

It would be more economical, if each vessel was to have a separate valve, each set of vessels having their valves connected to one rod leading to the engine, by which all the valves of one set of vessels could be opened, and those of the others closed simultaneously; in this arrangement one small pipe only is required, leading from the air-pump, and connected by suitable branches with the valves.

It is evident, that by increasing the number of vessels, and the length of the column, A, A, A, A, that the water can be raised to any desired height.

Amongst the advantages derivable from this system may be enumerated the avoiding the use of the ponderous (in some cases upwards of 200 tons) and expensive rods, and other appendages, which, under the present system, are indispensable; and the pipes in the column not having to sustain the same amount of pressure that they now have, will not require the same thickness of metal as is now required. This system will also admit of smaller engines working at an increased speed being used; and, when necessary, two such engines, instead of the immense engines now frequently employed; these will be a great saving of room in the shaft; the friction of the numerous plungers, buckets, rods, &c., will all be avoided; and the hemp, grease, and leather now used for packing, &c., will be nearly all saved—for although the number of valves in this system is increased, yet from the little strain that will come upon them, they will endure much longer than valves, as at present employed. George Bennetts.

Ashburton, Feb. 23.

SALES OF COPPER ORES—THE "STANDARD."

Sir,—I have read in your Journal, of the 14th February last, a reply to the inquiry of Henry La Reintrie, as to the precise meaning of the term "Standard," used in the reports of the sales of copper ores. You state that the word standard, as applied to mining, "simply means the present value of a ton of fine copper; and, to be understood, as to its practical effects, it must be associated with its two near kinsmen—price and produce;" and, for example, you assume in your first case the standard to be 116.

This is all very plain, so far; but, on looking to your report of sales in the same Journal, I find that the standard increases as the produce decreases—that Santiago, at 15½, has a standard of 84½; while that of Cronebane is 104½, with a produce of 5¾. Now this, Sir, is incomprehensible; and I am still in the dark as to the principles upon which the fluctuating value of the standard is regulated, as I must suppose there is not much difference in the value of fine copper, whether produced from rich ore or from poor. As I have been lead to believe that the standard regulates the price, I shall feel grateful for some further information from some of your correspondents, as to the principles upon which it is ascertained.—A South Australian Miner: *Adelaide, South Australia, Oct.* 10, 1846.

SULPHATE OF BARYTES.

Sir,—I shall esteem it a favour, if any of your readers will give me any information as to the mode of grinding, or otherwise rendering marketable, the sulphate of barytes, with a description of the machinery used for that purpose, and the method of testing its quality and value.—Cyano: *Feb.* 25.

HYPOTHESES ON IRON.

Sir,—Had I considered the crude announcement of a new triple compound of iron, carbon, and oxygen, as deserving a reply, I should have advised "Scrutator" to analyse his novelty, and furnish us the constituent proportions for his own information. That the fibre gained by lamination springs from increased alloy on the surfaces, is absurd in the extreme; but I must demur to the answering assumptions by counter assumption. This will not throw light on an important question. I, therefore, protest in the puddling furnace, as I before did in the blast furnace, to Mr. R. Mushet's hypothesis, that the earths are metallized by any exposure to carbon, in contact with the air. There is not a tittle of evidence to prove it, and I hold it an untenable analogy. It is monstrous to suppose the possibility of metals which deflagrate at ordinary temperatures. I, therefore, pronounce the doctrine, that clay lime and *other substances* deliver up their oxygen to carbon in the puddling furnace, is sheer fancy; and the assumption which this is advanced to support, must also be condemned unequivocally. We are quite in the dark on the causes of different quality of bar-iron. It is, by a correct inference, supposed that the unvarying characteristics afforded by the same localities, prove the virtues, or vices, of the produce to be combined with the nature of the materials; to assume, then, that unequal dispersion of carbon through the fibre renders it faulty, is the use of words without foundation. For instance, the best iron by pressure and motion will become granular—Is there here any absorption of carbon? *How the materials* act in creating quality is almost a *tabula rosa*, which we must endeavour to fill by *fact*, not *fancy*. That the presence of sulphur tends to red short, and cares the cold short produced by silex, are about the only prominent realities we possess. The beautiful discovery by Mr. Mushet, that manganese induces the welding quality on cast-steel, the benefit of which he was robbed of by the uncertainties of our patent law, is another fact. But, generally, how the varied materials and processes of different nations cause difference of quality, we know no more than of the constituents of the moon. The subject is too interesting for random speculation. Mr. R. Mushet's third theory is, that the irregularly crystalline granular product, called gray cast-iron, is a mechanical compound of carbon with white iron. Bring this fancy, likewise, to the test of fact. Pulverise gray iron, and fuse off the carbon, or throw the powder into water, and skim the carbonaceous pellicle from the surface. Nothing has my decided objection, more than these conjectural fabrications. There is, likewise, a comparison extremely inapposite betwixt solid iron and fluid quicksilver. But the fourth hyper-excessive refinement of imagination is the intense heat generated in forging iron by "friction of particles," by which it is assumed the slow process of deoxidation, which requires no intense heat, is performed momentarily under the hammer, upon portions of choice cinder, with hypothetical carbon. I trust Mr. R. Mushet may not bewilder himself in a rolling mill; he will certainly come out deoxidised and pulverised with intense heat, generated by friction of his particles. What need of balling or heating furnaces?—a hammer of sufficient weight is alone needed to generate heat in forging iron: it will grow hotter under the hammer, and the only care will be to prevent by excess the dissipation of the mass. A simple fact, witnessed in every blacksmith's forge, may be antagonized to "Scrutator's" theory—viz: the covering with pure quartz in powder the iron to be welded—which is a protection, by its infusibility, against that *oxidation*, on which "Scrutator" founds his letter. What amount of arsenic, phosphorus, or sulphur, has analysis detected in cast-iron?—Ferreus: *Feb.* 24.

MINE SURVEYING.

Sir,—I should feel obliged by your inserting the following questions, &c., in this week's *Mining Journal*:—1. Suppose, in driving an adit at 7° south of east, I find that at that point, or bearing, I shall encroach upon my neighbour's property, I want to direct my course southerly, in order to gain 36 links in 60 yards (the mouth of the adit to remain where it was at first)—required, the bearing of my new course?—2. How much will a bearing of 1° shift a course in one mile? Answers to the above (the operations in full) will very much oblige—A. B.: *Feb.* 22.

FREEING METALLIC ORES FROM SULPHUR.

Sir,—Will any of your correspondents be good enough to say, whether or no a simple process for freeing metallic ores from sulphur, and for collecting and saving the sulphur, is a desideratum? and, if it is, to point out in what way such a process might be turned to account, supposing it to effect the objects above-mentioned in a superior manner to the methods now in use?—C.: *Feb.* 22.

ON IRON PYRITES.

Sir,—On reading your last week's Journal, I find a notice of the specification of a patent granted to Mr. Bell, of the Don Alkali Works, for improvements in the smelting of copper ores, whereby the sulphur, which in the ordinary process is lost, is made to undergo certain operations, by which it is finally converted into sulphuric acid. It is, doubtless, a great consideration in all manufacturing processes to examine every available substance; but, in case a waste body can be converted into a saleable article, and that saleable article is injurious to the public health, I much query whether the adoption of any process for such a purpose can be termed an improvement. As a process, the conversion of the sulphur of copper ores into sulphuric acid is in this predicament. It is well known that most copper pyrites, more especially those from Cornwall, are much contaminated with arsenic—which poisonous metal follows, and adheres with great obstinacy to, the sulphur in all stages of the process of its manufacture into sulphuric acid, in which a portion of it is finally found. The use of an acid prepared in this manner, must be exceedingly injurious, when any of its preparations are employed in domestic life; for some acids prepared with arsenical iron pyrites contain a very large quantity of arsenic. It is a great desideratum to get rid of this arsenic; and many processes have been prepared, but none seem to have answered; and the only plan left seems to be, if we cannot get rid of the arsenic, to employ a pyrite free from that deleterious substance. Such a pyrites, either of iron or copper, is very rare; but, in the course of my professional duties, I have met with a sample of iron pyrites which contained no arsenic. This valuable substance was sent to me for examination by the Pennant Lead and Copper Mining Company, on whose property I am told a very large quantity exists, and which I have no doubt will be readily purchased by those parties who still wish to use pyrites, and to manufacture an acid free from arsenic.—John Mitchell: *Hawley-road, Kentish Town, Feb.* 22.

ON CARBONIC OXIDE AND CARBONIC ACID.

Sir,—Mr. Mushet, in his communication on carbo-oxide, in your last week's Journal, has made a statement which needs some comment—inasmuch as it is calculated to mislead those who, having but little knowledge of chemistry, may read it. Mr. M. states, that, "when oxides (as hammer scale and hematite) are introduced during the process of puddling, *carbonic acid* is formed, passing rapidly into *carbonic acid*, by union with a portion of the *carbon* of the fuel." Now, this statement is utterly opposed to all our present knowledge of chemistry. It is known for certain, that carbon unites with oxygen, in two proportions, to form carbonic oxide and carbonic acid. The first compound consists of carbon, one equivalent, or six parts; and oxygen, one equivalent, or eight parts; and the second compound, carbonic acid, is composed of one equivalent of carbon, or six parts, and *two* equivalents of oxygen, or 16 parts. That this is the true composition of these bodies, has been verified by innumerable experiments. If the true composition of carbonic acid be now considered in relation to the method of its formation, as stated by Mr. Mushet, it will be evident that that gentleman has completely mistaken the composition and method of formation of carbonic acid; for, as carbonic oxide can only be converted into carbonic acid, its higher degree of oxidation, by the absorption of oxygen, how is it possible to form the latter compound, by the addition of *carbon* to the former? That carbonic oxide is first produced in the process of puddling, and then converted into carbonic acid, there is not the slightest doubt—but its conversion is entirely due to the absorption of atmospheric oxygen, and not to that of carbon.—John Mitchell: *Hawley-road, Kentish Town, Feb.* 22.

VENTILATION OF MINES—Mr. GIBBONS'S SYSTEM.

Sir,—A letter, signed "Henry Johnson," appears in your Journal of Feb. 19. As the mine surveyor to the Prestwood Colliery, at Kingswinford (the one in question), and the other collieries belonging to Mr. Gibbons, I make all the reports of the state and occurrences of the collieries to him, and am responsible for their accuracy; and as I examine every pit daily, am always prepared to *prove* the truth of the reports made by me. Henry Johnson knew (as I can prove) that I was the proper person to apply to, and, had truth been his object, he would have had no difficulty in obtaining it from *me*—as I am, and always have been, willing and anxious to afford every information upon the plan, and the progress, of the system of ventilation practised by Mr. Gibbons, according to the directions given by him. That your readers may know the value of the authority of Henry Johnson, and as an act of justice to the respectable mine surveyors in this neighbourhood, and that it may not be supposed he is one, I have to state, that he is a youth out of his apprenticeship about two years, to a highly-respectable land and mine surveyor of Dudley; that he never had the direction or opening of any colliery; and, whilst with his employer, was never down a pit many times, as he was confined to mapping and land surveying. His employer, fully aware of the value of Mr. Gibbons's system (as he frequently surveys in the Kingswinford pits with me), introduced the plan in a pit belonging to John Williams, Esq., near Oldbury, where it has been attended with the most complete success. I state these facts with the authority of his employer. Henry Johnson says, that Mr. Gibbons states in his work, that his Kingswinford Colliery is, and "*has been*," perfectly free from inflammable gas. Mr. Gibbons says the exact contrary; a reference to page 16, note 5, will show that Mr. Gibbons distinctly states, that the colliery *has been* full of gas; and that even the spouts could not be made till he had devised the plan of boring a hole previously from the gate-road into the air-head. The causes and nature of the accident of the 6th and 7th of April, as happening to Charles Tomlinson, and a boy who was *with him* (Charles Oakley), and John Kaley, *alias* "Pottery Jack," are so fully explained by the declarations annexed, of the parties themselves, that any comment by me is unnecessary. But, could it be credited that Henry Johnson could publish this statement, when it appears that he was informed by one of these men (the only one applied to, although, it is said, the statement was "obtained from the lips of the man") that the accident had happened from his own incantion and forgetfulness, and *before any communication could* be made for a circulation of air, and, consequently, *before* any step whatever *could* be taken to drain the coal of gas, on the principle adopted by Mr. Gibbons, with which it had no more to do than with Mr. Struve's patent for airing mines, for the *sale* of which Henry Johnson is agent. I feel very glad that the opportunity I wanted is afforded me of giving the final blow to many ignorant and malicious reports, by establishing on indisputable evidence the two important facts—first, that the Kingswinford Colliery *has been* full of gas; secondly, that since Mr. Gibbons's plan is completed, that none can be found in it. Some parties, far more acute than Henry Johnson, industriously propagated a story that there never was any gas in the Kingswinford Colliery, and, therefore, *no* difficulties to be conquered. Mr. Gibbons never names a chimney of 100 ft. high, *see* "Note 4;" Henry Johnson talks of a "*whole* column of air 7 ft. diameter, *rushing* down the downcast shaft," being clearly ignorant that no more air *can* descend the shaft than *can* be discharged through the air-head driven in the coal of seven superficial feet; and that the "throttled aperture" of the ventilating chimney contains 25 superficial feet; and he is equally ignorant that an interruption, which would suspend or turn the *ascending* current of air has not the slightest effect on the *descending* current, for obvious reasons well known to every *practical* miner;—"and Mrs. A. desires me to say, that she permits Mr. A. to manage in his own way the *descending* columns of air, by shutting the door, but does not allow the *ascending* column in the chimney to be meddled with."—The ventilating chimney, 60 ft. high, costs 40*l.*; and of 90 ft., 80*l.* at contract prices, at the present high rate of labour: H. Johnson *supposes* 300*l.*!! But will any friend of common humanity weigh even the sum of 300*l.* (if it was necessary) against the lives of many valuable men. But I will not trespass on your columns, or the patience of your readers, further; for I have said quite sufficient to enable them to judge of the knowledge, "truth, and impartiality," of Henry Johnson: to be sure one could hardly expect *impartiality* from the *agent* of a project to drain mines of gas by machinal means from the *upcast shaft*, which would be extinguished by the success of Mr. Gibbons's system, but we have a right to require truth. Moses Taylor.

Kingswinford, Feb. 23.

I, Charles Tomlinson, do solemnly and sincerely declare, that I was in Mr. Gibbons's pit, at Kingswinford, on the 7th of April, 1846, when the sulphur caught my lighted candle, and burnt John Kaley, and also blew down a damp sheet, which divides the air in the air head. I immediately ran to Kaley's assistance, and conveyed him home; and the next morning I went with my lighted candle into the air-head, forgetting that the damp sheet had been displaced, and the sulphur immediately took fire, and burnt me and a boy, named Henry Oakley. I should not have gone into the air-head with my lighted candle, if I had remembered that the damp sheet was not in its place; the damp sheet would have kept the sulphur from that part of the air-head where the explosion took place. I have worked in coal pits for eight years, but I never before saw a mine so full of sulphur. Mr. Gibbons's plan of clearing away sulphur was not then formed, but it has since been carried out in this pit, and has entirely cleared it of sulphur, and rendered it perfectly cool and safe. On the 19th inst. I was asked by some person how long it had been since I was burnt; and I stated the time and related the circumstances, as I have now detailed them; and I make this solemn declaration, conscientiously believing the same to be true; and by virtue of the provisions of an Act, made and passed in the session of Parliament, held in the fifth and sixth years of the reign of his late Majesty, King William IV., &c., &c. Charles Tomlinson.

Declared at Dudley in the county of Worcester, before me, a Justice of the Peace for the counties of Stafford and Worcester, the same being adjoining counties, and I being personally resident in one of them, the 24th day of February, 1847.—John Roberts.

I, John Kaley, do solemnly and sincerely declare, that on the 6th of April, 1846, I was standing in the gate-road, in Mr. Gibbons's pit, at Kingswinford, whilst the men were brushing out the sulphur at the back of it. Charles Tomlinson stood near to me with a lighted candle in his hand. The sulphur came in contact with the candle, and took fire, and burnt me, but did not catch Tomlinson. I have worked in coal pits abounding with sulphur for 27 years, but I never saw a pit so full of sulphur as this pit. Mr. Gibbons's plan of clearing away the sulphur was not then formed, but it has since been in operation in this pit, and has entirely cleared it of sulphur, and rendered it perfectly cool and safe. I have never before been applied to for information as to the occurrence of the accident, or I should have stated the circumstances in the same manner as I have now done; and I make this solemn declaration, conscientiously believing the same to be true; and by virtue of the provisions of an Act, made and passed in the session of Parliament, held in the fifth and sixth years of the reign of his late Majesty, King William IV., &c., &c. John Kaley.

Declared at Dudley, in the county of Worcester, before me, a Justice of the Peace, for the counties of Stafford and Worcester, the same being adjoining counties, and I being personally resident in one of them, the 24th day of February, 1847.—John Roberts.

VENTILATION OF MINES—Mr. GIBBONS'S SYSTEM.

Sir,—I am amused at the phalanx of antagonists which Mr. Gibbons's enlightened views have elicited. This very circumstance, in my mind, speaks volumes in favour of the system of working and ventilation propounded by him. The imperfect and worthless methods of working coal, universally prevalent, are assailed, *hinc illæ lacrymæ*. Each and all seem to be *personally* implicated, and comes forward with the exclamation—"I am not the man!" First in the rank, and foremost in the field, is Mr. James Cadman, the pioneer and trumpeter of Mr. Denkin—as if he was too modest to proclaim his own worth and excellence. Those events show me clearly, that Mr. Gibbons has not only struck out a new path, but has "hit the nail on the head." Though I feel confused by the multiplex observations of "all and several," the case seems to be the very counterpart of the silversmith of Ephesus and his craftsmen. I am indebted to Mr. Gibbons's courtesy and kindness for a copy of his interesting work; I am strongly impressed with its truthfulness, and the sound principles which it eliminates; and I hope to be able soon to record my convictions of its value. Some of your correspondents have advanced their opinions, without having studied the work in any way—in such cases their sentiments are a rope of sand. I can nowhere perceive that Mr. Gibbons asserts, that his system is "catholicon for "all sorts and conditions" of coal, or that a modification of his plan may not sometimes be found essential and necessary. He simply shows, that in his own case it has been triumphantly carried out, and now in successful operation. The communications of Mr. Gibbons's assailants are diversified; some say it will not apply in such and such cases—others of this class put it in the shape of an interrogation—some again seem to endeavour to make it appear that it wants novelty, and had been already known, and yet another class sneer at its simplicity:—Columbus and the egg! An intelligent correspondent has accused me of *error* in one of my inferences; I am not aware that I said anything more than this—viz.: that a denser atmosphere would rush towards a rarer medium, and, of course, that cold air would flow towards any point attenuated by heat, whether by ascending or descending currents, as the case might be.

Portland-place, Hull, Feb. 19. J. Murray.

Mr. GIBBONS ON VENTILATION.

Sir,—If your correspondent (Mr. Johnson) is not aware of the difference betwixt a column of air descending *with* gravity, and a column ascending *against* that force, he may realise it by a simple experiment. Apply an obstacle in the front of his parlour fire, he will find it has no effect, but to concentrate the column, as proved by a keener combustion—a practice as well known to the aged domestic, as to the new patentee of Sylvester's stoves. Let, on the other hand, Mr. Johnson try the board and coal hod process at the top of the chimney, he will soon perceive the necessity of non-interference with the upcast shaft. If the skip, or corves, *could* check the *descent* of air in the downcast, which is impossible, so long as the rarefied column is established at the other end of the course, the keeping an amount of air out of the pit would be a trivial evil compared to that perversion of the current, which forces the inflammable air down the upcast. Appreciating this in full force, and the difficulty of maintaining *ascent* against gravity, *descent* under 30 miles of atmospheric pressure being easy, Mr. Gibbons philosophically seals the aperture of his air-chimney, that the ventilating chimney may have constant power, uninterrupted by atmospheric change. As to the blazing furnace at the bottom of the upcast, it is certain for an amount of brute force; a chimney 400 yards high, as in Newcastle collieries, must much exceed any supra-mundane structure, especially in its full efficacy, which, Dr. Murray correctly states, is not employed where the rarefaction is dilated over the area of a large pit. If it were necessary to continue the subterranean furnace, its effect would be enhanced by the application of Mr. Gibbons's isolated contrivance—but though, as an *expedential* force, the barbarous practice of making a working shaft a chimney may be necessary in gigantic collieries, to lead a current of air the distance of 30 miles, as was at one time done in Hetton Colliery, it neither follows that we *must* have such enormous courses for air to travel—a defect your correspondent "W." who has really read the book accurately, indicates—nor that, by adequate and ingenious contrivance, we cannot complete a far better ventilation. Ventilation has been too thoroughly a skein of expedients—what has been imperative, and no more, done—a fact those versed in the history of the northern collieries, and their slow adoption of improvements, will bear witness to. Nothing is done well except we resolve, at setting forth, upon more than is *merely necessary*; there can be no system without a margin so disposed. I will merely add, as an instance of the extreme argument which it seems determined to use against Mr. Gibbons, as if *improvement must* be put down, your correspondent "V." assumption, that atmospheric air entering the downcast pit, at a temperature of 30°, will pass through the workings, and ascend the upcast at the same heat, as if it had entered at 40°; and in neither case does he make any allowance for levity impaired by union with the inflammable air.—D. Murray, Jun.: *Gloucester, Feb.* 2.

AXIS OF ROTATION.

Sir,—I omitted, in my observations on Mr. Mushet's commentary, to remind him, that, according to the researches and conclusions of Sir Isaac Newton, the axis of rotation of the terrestrial globe *has never changed*, and

this stability has been confirmed by Laplace. I make this rejoinder the more willingly now, as it is *final* on my part. In my Record of Geological Phenomena, I have to do with matter of fact, not to deal with hypothesis or theory, and the question of a *universal* deluge is as yet in abeyance.

Portland-place, Hull, Feb. 19. ——— J. MURRAY.

RAILWAY WHEEL TIRES.

SIR,—In reference to the late accident on the Great Western Railway, by which two passengers were killed, owing to the tire of a driving wheel flying off from an engine travelling in an opposite direction, I beg leave to remark, that, amongst the many suggestions or recommendations which have arisen, either out of the inquest, or from the public, I have waited for one which struck me forcibly so soon as I became acquainted with the facts. It appears that the *tire* was *defective* at the welding point, and caused the accident; and that, had the tire been fastened on by SCREWS, it would have held on, although it might have given way where welded. I consider this precaution an excellent one; and observe that all *new driving wheels* were to have the tires so secured, and thus far all is right. But, Mr. Editor, the fact being admitted that one tire of one of the wheels of the Great Western engines having been found defective, may not *other tires from the same manufactory*, on wheels, now rolling round, be also defective—if so, why may not a similar accident happen? The remedy for such is very simple—that of the Great Western Company having all such tires secured by screws, at intervals over the whole circumference. If you deem this hint worth printing, I shall be glad to see these remarks in your next Journal.—A CONSTANT READER: *King-street, Cheapside, Feb.* 25.

ON THE APPLICATION OF MINERALISED WOOD FOR RAILS.

SIR,—Being desirous of information as to the results of the application of mineralised wood to the purpose of making rails on railroads, we beg to inquire, whether you could supply us with the same; should you be able, we shall feel greatly obliged if you will do so. We wish generally to be informed as to the advantages which wood in that state, and applied to the above purpose, afford, and particularly as to its durability, with respect to constant wear, its liability to rot, and its cost. * * * *

Birmingham, Feb. 20.

[This is a subject on which we have had several inquiries lately, and we should feel obliged if some of our correspondents, who are interested, would favour us with the necessary information.]

The Mechanic: or, Shrink not from Toil.

BY W. H. BUSHNELL.

"The Mechanic, Sir, is God's Nobleman!"

Shrink not from toil! the sweat drops
Thy care-worn brows that gem,
Are nobler far than diamond's blaze,
Or regal diadem—
Are priceless jewels in thy crown—
More glorious, holier far,
Than blood-bought wreaths by conq'ror won
In war's triumphal car.

Shrink not from toil! true manhood
Owns ye the best of earth,
Though Want has dogg'd you every step,
As blood-hounds from your birth;
Though when the evening's sun had sunk
Behind the dusky cloud,
Still bent ye o'er the heavy task,
Thy aching sinews bowed.

Shrink not! and oh, despise not
The toil-stained brow and hand,
They're an emblem of your majesty,
The lordly of the land—
They tell of noble victory,
Against the cares of earth,
And harden'd hands abode war's shock
In days of Freedom's birth.

Shrink not from toil! what recks it,
Though stained thy sinewy hand,
And swarth thy brow as summer's sun,
In Ethiop's dusky land.
What, though thy form is bent by toil,
Till grace ne'er claims a part;
It matters not, if pure thy soul—
Unbent by vice, thy heart.

Shrink not from toil! though ill repaid,
Though worldling pass ye by,
With scowl upon his pamper'd lip,
And smile within his eye.
True manhood will respect you,
True fame shall be thy meed,
And folly shrink before thine arm,
Raised in the hour of need.

Then shrink not! fear not thou stern toil;
Wield well thy heavy sledge;
Urge on the plane, the grating saw—
Sink deep the riving wedge.
Wring from the earth her hoarded wealth;
Brave the wild stormy sea;
The hand that toil'd to frame the earth,
Shall guard and cherish thee!

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	Address.	Day.	Hour.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.
Entomological	17, Old Broad-street	Monday	8 P.M.
Chemical	Society of Arts, Adelphi	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Pathological	21, Regent-st., Waterloo-pl.	Monday	8 P.M.
Medical and Chirurgical	53, Berners-street	Monday	4 P.M.
Linnæan	Soho-square	Tuesday	8 P.M.
Horticultural	21, Regent-street	Tuesday	2 P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Zoological	11, Hanover-square	Thursday	3 P.M.
Royal	Somerset-house	Thursday	4 P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Institution	Albemarle-street	Friday	8 P.M.
Botanical	20, Bedford-st., Covent-gar.	Friday	8 P.M.
Asiatic	14, Grafton-street	Saturday	2 P.M.
Westminster Medical	27 A, Sackville-street	Saturday	8 P.M.

INSTITUTION OF CIVIL ENGINEERS.

FEBRUARY 23.—Sir JOHN RENNIE (President) in the chair.

A supplement to the papers on the North Holland Canal, by Mr. Jackson, which were brought forward on the two preceding evenings, was read. It contained a description of the harbour and works at Niewediep, which might be considered as legitimately connected with the Helder Canal, inasmuch as they were constructed with a view of affording shelter to vessels of war and merchantmen navigating the North Sea. The banks or mounds situated at the mouth of the Maradiep channel, act in a peculiar manner; they narrow the entrance, resist the undue influx of the tides, thus preventing injury to the coast of the Zuyder Zee; they oppose difficulties to the entrance of hostile fleets, as the navigable channels run within range of the protecting forts, and they assist in maintaining the velocity of the currents which keep the channels at their usual depth. On the coast of Holland the ebb tides continue to pass off along the Noorder-gat a full hour and a half after the tide has commenced flowing up along the Schulpen-gat; this can only be accounted for by supposing that the tide runs up from the south-west, and enters the Schulpen-gat, whilst the ebb still continues, in consequence of the draft of the tide northward along the coast. The Schulpen-gat and Landsdiep, may therefore be termed the flood channels, whilst the Noorder-gat may be considered the ebb channel. Upon these spots, whose preservation was of such consequence to the country, the Dutch have lavished their best care and exercised their ingenuity. The shore works consisted chiefly of groynes, composed of timber piles and fascines, with stone covering. Their average length was 200 yards, with slopes of about 1 in 8 or 10. In consequence of the report of the commission appointed in 1760, the engineers, Brunnings and Goudral, were instructed to proceed with the formation of a warping bank of fascines 7360 ft. long, with double planking to accumulate the sand, in order to fill up the interstices of the fascines, and thus preserve them from decay. A breakwater also, 1856 ft. in length, 73 ft. wide at 3 ft. below high water, with slopes of 1 to 1. This was also formed of fascine beds weighted with 3000 lbs. of stone, and 4000 lbs. of tiles upon every superficial area of 144 square feet. The upper surface was covered with matting and made convex, the centre being 1 ft., and the sides 2 ft. below the level of high water; hurdling was then used, and the whole was covered with blocks of stone weighing from 1500 lbs. to 1800 lbs. each. An additional length of 2060 ft. was subsequently built, and the warping bank being completed, and by means of these works the ebb stream was increased to such an extent as at once to deepen the channel 19 in., although the bed was of clay. In 1783, dredging was resorted to, and with the action of the stream a depth of 19 ft. was arrived at. The whole length of the proposed harbour was then dredged to a depth of 17 ft. under high-water level. Another warping bank of 3675 ft. in length was then constructed with numerous groynes to arrest the sand and preserve the coast. A quay wall and jetty were then added, the piles composing the latter were covered with sheet-piling between high-water level and 1 ft. below the ground, in order to preserve them from the ravages of the "teredo navalis," which, however, it is the popular opinion may be also prevented by driving the piles through fascines. A portion 60 ft. in length of the breakwater was torn away by a storm. This slip was filled up with large stones, but they were ineffectual, and fascines were ultimately had recourse to for repairing the breach. The depth of the channel was thus increased to nearly 25 ft., so that frigates could pass with safety. In 1799, 151 vessels were lying there at anchor, 14 of which were men of war, and four were East Indiamen. The basin is 1292 ft. long, and 646 ft. wide, with large store houses, dock buildings, fortifications, &c. of the most solid description, and thoroughly complete for a naval arsenal.

The details of every part of the works were given. A special vote of thanks was passed to Mr. Jackson for the paper, and an interesting discussion ensued, in which the highest compliments were paid to the author for the paper he had presented and the manner in which it was illustrated. A description was given of Dymchurch wall, which defends Romney Marsh, an extent of 24,000 acres, and also of several other sea defences at the mouth of the Thames and elsewhere, in which fascines were extensively used. The new embankments were also described; specimens were shown of the "Arundo Arenaræa," a coarse grass, whose roots extend sometimes to a length of upwards of 30 ft., and which is eminently useful in securing the sand of the coast from being blown or washed away. Among several cases of the failure of protecting walls, one was particularly described of a nearly vertical sea wall, whose foundations were sunk down full 5 ft. below the shingle of the coast, the wall was built with great care and with first-rate materials; it was, however, exposed to the action of a heavy sea in North Wales. During a severe storm the waves were thrown up in a mass full 40 ft. above the wall, and, falling from that height with the force due to such a distance and mass, very speedily destroyed the whole wall. In quite an exposed a situation a slope, which enabled the waves to expend their strength and broke them up into foam, did not suffer at all. Numerous deductions were drawn from these and many other instances, all unfavourable to the theory of vertical sea walls; which it has recently become fashionable to recommend as a theoretically more correct form, in opposition to the well-tried plan of eminent civil engineers, who have almost universally adopted slopes for resisting the action of the sea.

BRISTOL AND EXETER RAILWAY COMPANY.

Notice is hereby given, that a SPECIAL GENERAL MEETING of the proprietors of this company will be HELD at the White Lion Hotel, Broad-street, Bristol, on Thursday, the 11th day of March, 1847, at One o'clock in the afternoon, when drafts of the following Bills will be submitted to the meeting:—

1. A Bill to enable the Bristol and Exeter Railway Company to make a Branch Railway from the parish of Lyng, near the town of Taunton, to join the Wilts, Somerset, and Weymouth Railway, near Castle Cary, in the county of Somerset.
2. A Bill to enable the Bristol and Exeter Railway Company to make a Branch Railway from the Bristol and Exeter Railway, in the parish of Bleadon, to the city of Wells, the town of Glastonbury, and the parish of Street, all in the county of Somerset.

And an agreement for the purchase, by the Bristol and Exeter Railway Company, of the Exeter and Crediton Railway, will be submitted for confirmation by the said proprietors.

JOHN BROWNE, Deputy-Chairman.
J. B. BADHAM, Secretary.

Railway Office, 30, Broad-street, Feb. 4, 1847.

BRISTOL AND EXETER RAILWAY COMPANY.

Notice is hereby given, that the next HALF-YEARLY GENERAL MEETING of the proprietors of this company will be HELD, in pursuance of the Act of Parliament, at the White Lion Hotel, in the city of Bristol, on Thursday, the 4th of March, at Twelve o'clock, for the election of four directors, who retire by rotation, and for other affairs.

The Chair will be taken at One o'clock precisely.

JOHN BROWNE, Deputy-Chairman.

Power will then be asked of the proprietors to subscribe the sum of £7500 towards the capital of the Plymouth Great Western Dock Company; and to take 4000 half-shares, of £25 each, in the South Devon Railway, to which the Bristol and Exeter Railway Company are entitled, as proprietors of 4000 whole shares.

The retiring directors may be re-elected.

The transfer books will be closed on Tuesday, the 23d of February, and not be re-opened until after the said general meeting, on the 4th of March.

Agreeably to the third resolution of the general meeting of the 3d of September, the dividend for the half-year ending on the 31st of December last will be remitted to those shareholders who stand registered on the said 23d day of February.

Shares in arrear do not entitle the holders to vote, nor are proxies valid, unless lodged with the secretary five days, at the least, before the meeting.

By order of the board of directors,
Bristol Office, 30, Broad-street, Feb. 1, 1847. J. B. BADHAM, Secretary.

WEST CORNWALL RAILWAY.—NOTICE OF CALL.

—FIRST CALL OF TWO POUNDS PER SHARE.—Notice is hereby given, that the directors of the WEST CORNWALL RAILWAY COMPANY have this day made a CALL of TWO POUNDS per share upon the respective shareholders in the said company, and have appointed such call to be PAID on or before Monday, the 22d February, 1847, to either of the under-mentioned bankers—that is to say—

To Messrs. Denison, Heywood, Kennards, and Co., 4, Lombard-street, London; or Messrs. Vivian, Grylls, Kendall, and Co., Helston, Cornwall.

By order of the board,
FREDERICK LE MESURIER, Secretary.

35, Broad-street-buildings, London, Jan. 20, 1847.

PHILADELPHIA & READING RAILROAD COMPANY.

—A DIVIDEND on the STOCK of the company having been declared at the annual meeting, held in January, Notice is hereby given, that the SCRIP RECEIPTS for SHARES must be REGISTERED.—For convenience of transmission, Messrs. M'Calmont, Brothers, and Co., the agents of the company, will receive such scrip receipts, and forward them, at the risk of the holders, to Philadelphia, for registration.

3, Crown-court, Philpot-lane, Feb. 19, 1847.

TO RAILWAY COMPANIES, CONTRACTORS, AND OTHERS,

requiring RAILWAY AXLES, WHEELS, and IRONWORK for CARRIAGES, &c.; also IRON and STRAINED WIRE FENCES, may be SUPPLIED by

MR. EDWARD HILL,
OF BRIERLEY HILL IRON-WORKS, NEAR DUDLEY,

who will give the BEST PRICES for OLD AXLES, and any description of SCRAP IRON

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED PATENT ELASTIC METALLIC PISTONS.

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.
2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.
3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

PATENT GALVANISED IRON AND WIRE ROPE WORKS,

MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.—Mr. J. S. Tregellas, Truro, agent for Cornwall.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING

AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES FOR STEAM-BOILERS.

THE BIRMINGHAM PATENT IRON TUBE COMPANY,

42, *CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,*

MANUFACTURE TUBES under an exclusive license from Mr. Richard Prosser, the patentee. These tubes are now very extensively used in the boilers of marine and locomotive steam-engines in England and on the continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld. They may be fixed in the boilers without ferules, and can be taken out and refixed without additional trouble or expense.—Address, 42, Cambridge-street, Crescent, Birmingham.

LONDON WAREHOUSE,
68, *UPPER-THAMES-STREET.*

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—

LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, JUN., & CO., DARLASTON,
STAFFORDSHIRE,

MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above.

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY.

26, *CORNHILL, LONDON.*

Capital £100,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Interest may Borrow.
£1000	£0 3 4	1837	£317 15 1	£109 0 11	£16 0 4	£445 0 0
		1838	192 5 0	87 1 4	13 10 2	395 11 1
		1839	166 11 10	74 1 9	11 3 1	346 2 3
		1840	116 7 6	54 0 10	7 15 10	296 13 4
		1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year.

F. FERGUSON CAMROUX, Secretary.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

TO THE DIRECTORS
OF THE BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

WE, the undersigned, being shareholders in the Birmingham and Oxford Junction Railway Company, holding, in the aggregate, more than 5000 shares (that is to say, more than 1-10th part of the capital), therein do, by this writing, under our hands, require you forthwith to call an extraordinary general meeting of the shareholders of the said company for the following objects or purposes—that is to say, for the purpose of considering the propriety of, and if so determined, for the purpose of taking the necessary steps at such meeting for increasing the number of the directors of the said company, by the election, if so thought fit, of six new directors, in addition to the existing directors of the said company; and if so thought fit, of proceeding, at such meeting, to elect such new directors accordingly; and in case of such election, of determining the order of rotation in which such new directors shall go out of office, and what number shall be a quorum at meetings of the directors of the said company; and also for the purpose of considering the provisions of a bill, entitled, "A proposed Bill for uniting the Birmingham and Oxford Junction Railway Company, and the Birmingham, Wolverhampton, and Dudley Railway Company, into one company; and for authorising the sale of the Birmingham, Wolverhampton, and Dudley Railway, and other new works, to the Great Western Railway Company," deposited in the month of December last, in the Private Bill Office of the House of Commons, and of considering and determining upon the propriety of introducing into Parliament, or of proceeding with or withdrawing the said Bill; and, if thought fit, of taking such steps for proceeding with, or withdrawing, the said Bill—and passing such resolutions, and giving such instructions to the directors of the said Birmingham and Oxford Junction Railway, touching any sale or other disposition of the said Birmingham and Oxford Junction Railway, or for the effecting any of the above-mentioned purposes, as the said meeting may think expedient.—Witness our hands, this 23d day of January, 1847.

E. J. MOZLEY, Liverpool
CHAS. MOZLEY, Liverpool
C. H. JONES, Liverpool
ELEANOR JOSEPH, Liverpool
ELIZABETH JOSEPH, Liverpool
SARAH JOSEPH, Liverpool
WM. REYNOLDS, Jun., Liverpool
THOS. GOODIER, Liverpool
F. HITCHMOUGH, Liverpool
R. J. KING, Liverpool
THOS. KINNERSLEY, Liverpool
J. J. FARREN, Yardley, Worcestershire
J. STUBBS, Liverpool
E. T. GREAVES, Birmingham
G. E. MARSDEN, Manchester
E. LICHFIELD, Liverpool
JOHN D. BURTON, Manchester
WM. J. BEALE, Birmingham
J. C. HARRIS, Warwick
HENRY SUMMERFIELD, Warwick
D. SUMMERFIELD, Leamington
T. R. COBB, Banbury
S. SPURRETT, Banbury
THOS. COLLINS, Warwick
WM. MUNTON, Banbury
J. MILLWARD, Moithrop, Banbury
E. MILLWARD, Moithrop, Banbury
R. S. WISE, Banbury
ELIZABETH PARRY, Banbury
ABEL PEYTON, Birmingham
SAML. BEALE, Birmingham
J. P. MOTTERAM, Manchester
SAML. BROOKS, Manchester
WM. A. GREER, Manchester
THOS. A. HOPE, Liverpool
JAS. COCKSHOTT, Liverpool
THOS. HILTON, Manchester
ROBT. JONES, Liverpool
THOS. COLMORE, Birmingham
JOSIAH JONES, Liverpool
THOS. D. HORNBY, Liverpool
THOS. GASQUOINE, Manchester
W. F. POWELL, Manchester
JOHN BEETHOM, Manchester
EDWD. HALL, Manchester
HY. RAWSON, Manchester
W. G. KEARSLEY, Manchester
THOS. TRUEMAN, Manchester
THOS. HEATH, Warwick
CHAS. LAMB, Warwick
JOHN MUNTON, Banbury
WM. WILSON, Banbury
THOS. A. GILL, Warwick
E. COBB, Banbury
W. J. KITE, Banbury
W. PAGE, Banbury
C. SATTERTHWAITE, Throgmorton-street, London
E. F. SATTERTHWAITE, Throgmorton-street, London
JOHN WALLER, Stock Exchange, London
A. A. HOGHTON, Stock Exchange, London
E. L. MORGAN, 3, Bank Chambers, London
J. and D. HAES, 15, Throgmorton-street, London
T. L. CROMMELIN, 7, Grove-end-road, St. John's Wood, London
J. E. PHILLIPS, Stock Exchange, London
H. GRISEWOOD, Stock Exchange, London
THOS. LAWRENCE, Denmark-hill, Camberwell, Surrey
WM. ANNING, 4, Park-terrace, Brixton
JOSH. LAURENCE, Auction Mart, London
J. LOCKE, 11, Adam-street, Adelphi, London
J. WHEELER, 4, Belgrave-place, Wandsworth-road, London
E. TAPLIN, Victoria-park, Hackney, London
G. KEITH, 11, Bridge-street, Westminster
J. M. PARSONS, 6, Raymond-buildings, Gray's Inn, London
J. C. FORSYTH, 160, Strand, London
E. STRONGE, 27, Duke-street, St. James's, London
J. W. COOK, 37, Throgmorton-street, London
R. HOLLOWAY, 6, Hanover-terrace, Kensington-park, London
W. J. BARKER, Stock Exchange, London
R. BAKER, Great College-street, Camden Town
C. G. G. WILKINSON, Holland-street, North Brixton
BENJN. GREEN, Evans's Hotel, Covent-garden
HY. HARGREAVES, 40, South-bank, Regent's-park, London
HY. TOOTAL, London
F. SWANWICK, Chesterfield
R. PETTON, 38, Mornington-crescent, London
R. J. B. BROUGHTON, 1, Melcombe-place, Dorset-square, London
R. W. CARDEN, Stock Exchange, London
C. E. WHITE, 8, Cambridge-square, London
THOS. L. GOOCH, Hornsey-lane, Highgate
E. S. ELLIS, Leicester
R. PENDLEBURY, Stockport
W. S. ATKINSON, 11, Great Rider-street, St. James, London
JOSH. FIELDING, Leicester
J. D. HARRIS, Leicester
JOHN TAYLOR, Leicester
JOSH. CRIPPS, Leicester

Notice is hereby given, that, in pursuance of the Requisition hereinbefore set forth, an EXTRAORDINARY GENERAL MEETING of the shareholders of the BIRMINGHAM AND OXFORD JUNCTION RAILWAY COMPANY will be HELD at Dee's Royal Hotel, Temple-row, Birmingham, on Saturday, the 13th day of March, 1847, at Two o'clock in the afternoon.

Proxy papers, in order to be available, must bear a stamp of 2s. 6d., and must be received by the secretary 48 hours, at least, before the time appointed for the meeting.

Dated this 10th day of February, 1847. PHILIP HENRY MUNTZ, Chairman.
JOHN W. KIRSHAW, Secretary.

IMPROVED LIFTING JACKS,

MANUFACTURED BY

GALLOWAYS' AND CO.,

KNOTT MILL,

MANCHESTER.

IMPROVED RATCHET JACK. HALEY'S PATENT LIFTING JACK.

*** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

NO BREWING UTENSILS REQUIRED.

PATENT CONCENTRATED MALT AND HOP EXTRACT,

enables PRIVATE INDIVIDUALS to MAKE

FINE HOME-BREWED ALE,

WITHOUT EMPLOYING ANY BREWING UTENSILS.—It has only to be dissolved in hot-water and fermented.—Sold, in jars, for medicinal and other purposes, at 1s. 6d., 3s., 1s. 6d.; and in bottles for brewing 9 to 18 gallons and upwards of ale, at 2s. 6d., 5s., 12s. 6d. each, by the

BRITISH NATIONAL MALT EXTRACT COMPANY,

7, NICHOLAS-LANE, LOMBARD-STREET; Petty, Wood, and Co., 53, Threadneedle-street; Wix and Sons, 22, Lendenhall-street; Batty and Co., 15, Finsbury-pavement; Ind Coope and Peach, 65, Piccadilly; Hockin and Co., 98, Duke-street, Manchester-square; and all men and grocers generally.

Also, just published, and may be had gratis,

NATIONAL BREWING: A GUIDE to the USE of CONCENTRATED MALT AND HOP EXTRACT, for BREWING and WINE MAKING, to which is added, MEDICAL OPINIONS relative to the virtues of malt and hops.

London:—Printed and Published, weekly, by HENRY BOHN, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. February 27, 1847.